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PANASONIC AG-527DVDE OPERATING INSTRUCTIONS MANUAL

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Panasonic

Professional/ Industrial Video

TV/DVD/VCR Combination
Operating Instructions

Model No. AG-527DVDE

• Initial Setup and Connection Procedures are on pages 11 to 17.

DOLBY DIGITAL

dts DIGITAL OUT

DVD VIDEO

CD-R/RW playback
Ability to play back may depend on recording conditions

READY TO PLAY!

COMPACT disc DIGITAL VIDEO

COMPACT disc DIGITAL AUDIO

MP3 PLAYBACK

energy

As an ENERGY STAR Partner, Matsushita Electric Corporation of America has determined that this product or product model meets the ENERGY STAR guidelines for energy efficiency.

Please read these instructions carefully before attempting to connect, operate, or adjust this product.
Please save this manual.

PRO LINE

LSQT0620A

Important Safeguards and Precautions

READ AND RETAIN ALL SAFETY AND OPERATING INSTRUCTIONS. HEED ALL WARNINGS IN THE MANUAL AND ON UNIT

INSTALLATION

1 POWER SOURCE CAUTION

Operate only from power source indicated on unit or in this manual. If uncertain, have your Electric Utility Service Company or Video Products Dealer verify your home power source.

2 POWER CORD PLUG

For safety, this unit has a polarized type plug (one wide blade), or a three-wire grounding type plug. Always hold the plug firmly and make sure your hands are dry when plugging in or unplugging the AC power cord. Regularly remove dust, dirt, etc. on the plug.

POLARIZED PLUG CAUTION:

The plug fits into outlet only one way. If it cannot be fully inserted, try reversing it. If it still will not fit, have an electrician install the proper wall outlet. Do not tamper with the plug.

GROUNDING PLUG CAUTION:

The plug requires a three-hole grounding outlet. If necessary, have an electrician install the proper outlet. Do not tamper with the plug.

3 POWER CORD

To avoid unit malfunction, and to protect against electrical shock, fire or personal injury:

- Keep power cord away from heating appliances and walking traffic. Do not rest heavy objects on, or roll such objects over the power cord.
- Do not tamper with the cord in any way.
- An extension cord should have the same type plug (polarized or grounding) and must be securely connected.
- Overloaded wall outlets or extension cords are fire hazards.
- Frayed cords, damaged plugs, and damaged or cracked wire insulation are hazardous and should be replaced by a qualified electrician.

4 DO NOT BLOCK VENTILATION HOLES

Ventilation openings in the cabinet release heat generated during operation. If blocked, heat build-up may result in a fire hazard or heat damage to discs.

For your protection:

a. Never cover ventilation slots while unit is ON, or operate unit while placed on a bed, sofa, rug, or other soft surface.

b. Avoid built-in installation, such as a book case or rack, unless properly ventilated.

5 AVOID EXTREMELY HOT LOCATIONS OR SUDDEN TEMPERATURE CHANGES

Do not place unit over or near a heater or radiator, in direct sunlight, inside closed vehicles, in high temperature [over 95 °F (35 °C)], or in over 75% humidity. If unit is suddenly moved from a cold place to a warm one, moisture may condense in unit and on the tape causing damage. Never subject unit to vibration, impact, or place it so that the surface is tilted as internal parts may be seriously damaged.

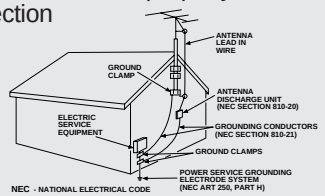
6 TO AVOID PERSONAL INJURY

- Never place unit on support or stand that is not firm, level, and adequately strong. The unit could fall causing serious injury to a child or adult and damage to the unit.
- Move any appliance and cart combination with care. Quick stops, excessive force, and uneven surfaces may cause objects to overturn.
- Carefully follow all operating instructions.

OUTDOOR ANTENNA INSTALLATION

1 SAFE ANTENNA AND CABLE CONNECTION

An outside antenna or cable system must be properly grounded to provide some protection against built up static charges and voltage. Section 810 of the National Electrical Code, ANSI/NFPA 70 (in Canada, part 1 of the Canadian Electrical Code) provides information regarding proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.


ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)
NEC - NATIONAL ELECTRICAL CODE

2 KEEP ANTENNA CLEAR OF HIGH VOLTAGE POWER LINES OR CIRCUITS

Locate an outside antenna system well away from power lines and electric light or power circuits so it will never touch these power sources should it ever fall. When installing antenna, absolutely never touch power lines, circuits or other power sources as this could be fatal.

USING THE UNIT

Before unit is brought out of storage or moved to a new location, refer again to the INSTALLATION section of these safeguards.

1 KEEP UNIT WELL AWAY FROM WATER OR MOISTURE, such as vases, sinks, tubs, etc.

2 IF EXPOSED TO RAIN, MOISTURE, OR STRONG IMPACT, unplug unit and have it inspected by a qualified service technician before use.

3 ELECTRICAL STORMS

During a lightning storm, or before leaving unit unused for extended periods of time, disconnect all equipment from the power source as well as the antenna and cable system.

4 WHEN UNIT IS PLUGGED IN

- DO NOT OPERATE IF:
- liquid has spilled into unit.
- unit was dropped or otherwise damaged.
- unit emits smoke, odours, or noises.

Immediately unplug unit, and have it inspected by a service technician to avoid potential fire and shock hazards.

- Never drop or push any object through openings in unit. Touching internal parts may cause electric shock or fire hazard. Do not put any foreign object on the tray.
- Keep magnetic objects, such as speakers, away from unit to avoid electrical interference.

5 USING ACCESSORIES

Use only accessories recommended by the manufacturer to avoid risk of fire, shock, or other hazards.

6 CLEANING UNIT

Unplug unit. Use a clean, dry, chemically untreated cloth to gently remove dust or debris. DO NOT USE cleaning fluids, aerosols, or forced air that could over-spray, or seep into unit and cause electrical shock. Any substance, such as wax, adhesive tape, etc. may mar the cabinet surface. Exposure to greasy, humid, or dusty areas may adversely affect internal parts.

SERVICE

1 DO NOT SERVICE PRODUCT YOURSELF

If, after carefully following detailed operating instructions, the unit does not operate properly, do not attempt to open or remove covers, or make any adjustments not described in the manual. Unplug unit and contact a qualified service technician.

2 REPLACEMENT OF PARTS

Make sure the service technician uses only parts specified by the manufacturer, or have equal safety characteristics as original parts. The use of unauthorized substitutes may result in fire, electric shock, or other hazards.

3 SAFETY CHECK AFTER SERVICING

After unit is serviced or repaired, request that a thorough safety check be done as described in the manufacturer's service literature to ensure video unit is in safe operating condition.

Safety Precautions/Mesures de sécurité

Warning : To prevent fire or shock hazard, do not expose this equipment to rain or moisture.
Caution : To prevent electric shock, match wide blade of plug to wide slot, fully insert.
Avertissement : Afin de prévenir tout risque d'incendie ou de chocs électriques, ne pas exposer cet appareil à la pluie ou à une humidité excessive.
Attention : Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

FCC WARNING : Any unauthorized changes or modifications to this equipment would void the user's authority to operate.

This television receiver provides display of television closed captioning.

CAUTION:
UNIT IS A CLASS I LASER PRODUCT.
HOWEVER THIS UNIT USES A VISIBLE LASER BEAM WHICH COULD CAUSE HAZARDOUS RADIATION EXPOSURE IF DIRECTED. BE SURE TO OPERATE THE UNIT CORRECTLY AS INSTRUCTED.

WHEN THIS UNIT IS PLUGGED TO THE WALL OUTLET, DO NOT PLACE YOUR EYES CLOSE TO THE OPENING OF THE DISC TRAY AND OTHER OPENINGS TO LOOK INTO THE INSIDE OF THIS UNIT.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

DO NOT OPEN COVERS AND DO NOT ATTEMPT TO REPAIR THE UNIT YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

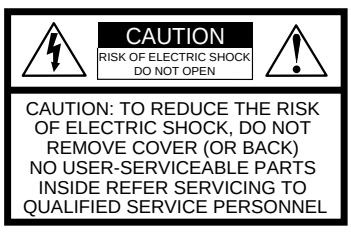
CAUTION:
LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.

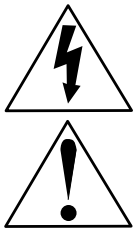
ATTENTION:
RAYONNEMENT LASER EN CAS D'OUVERTURE. NE PAS REGARDER DANS LE FAISCEAU.

(Inside of product)

FCC NOTICE:
This equipment has been tested and found to comply with part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when operated in a residential environment. If this eqiupment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, use the equipment in another location and/or utilize an electrical outlet different from that used by the receiver. If necessary, consult the dealer or an experienced radio/TV technician for help. You may find the booklet, 'Something About Interference' available from FCC local regional offices helpful.

This product utilizes both a Cathode Ray Tube (CRT) and other components that contain lead. Disposal of these materials may be regulated in your community due to environmental considerations. For disposal or recycling information please contact your local authorities, or the Electronics Industries Alliance: <http://www.eiae.org.>


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL



This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

Region Management Information

Region Management Information: This unit is designed and manufactured to respond to the Region Management Information that is recorded on a DVD disc. If the Region number described on the DVD disc does not correspond to the Region number of this unit, this unit cannot play this disc.

The Region number for this unit is 1.

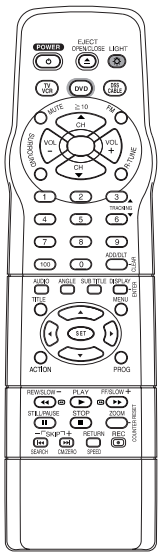
Before Using

Congratulations

on your purchase of one of the most sophisticated and reliable products on the market today. Used properly, it will bring you and your family years of enjoyment. Please fill in the information below. The serial number is on the tag located on the back of your unit.

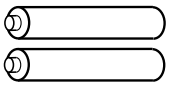
Date of Purchase _____
Dealer Purchased From _____
Dealer Address _____
Dealer Phone No. _____
Model No. **AG-527DVDE**
Serial No. _____

Accessories

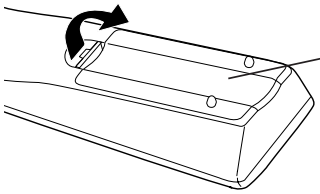


☐ Remote Control
LSSQ0302

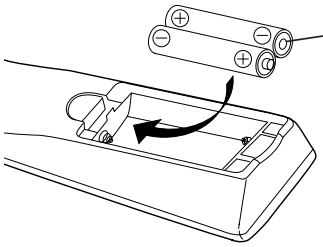
☐ Batteries 2 “AA”



Loading the Batteries



1) Open the cover.



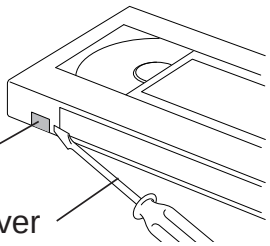
2) Insert batteries as marked.

3) Close the cover.

☐ **Battery replacement caution**
- Do not mix old and new batteries.
- Do not mix alkaline with manganese batteries.

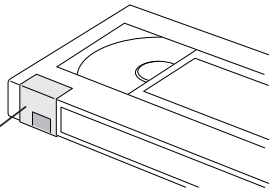
Prevent Accidental Tape Erasure

Break off the tab to protect.



Record Tab
Screw driver

To record again.



Cover the hole with cellophane tape.

Record/Playback Time

Only use tapes with the VHS mark in this unit.

Tape Speed Setting	Type of Video Cassette		
	T60	T120	T160
SP (Standard Play)	1 Hour	2 Hours	2 Hours 40 Minutes
LP (Long Play)	2 Hours	4 Hours	5 Hours 20 Minutes
SLP (Super Long Play)	3 Hours	6 Hours	8 Hours

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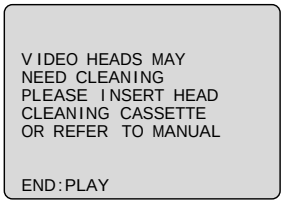
Information (Unit, Cassette, Disc)

Head Cleaning

Playing older or damaged tapes may eventually cause video heads to become clogged.

Head Clog Sensor

During playback this screen appears if clogging is detected. To remove screen, press PLAY on the remote or unit.



- **Use "dry" type head cleaning cassette only.** (Part No. NV-TCL30PT is recommended.)
- Follow cleaning tape directions carefully. Excessive use of head cleaning tape can shorten the video head life.

DST (Daylight Saving Time)

Unit auto adjusts clock for DST (Daylight Saving Time.)

■ Spring (First Sunday in April)

DST : ON ➔ Sets clock ahead one hour.

■ Autumn (Last Sunday in October)

DST : ON ➔ Turns clock back one hour.

- If your area does not observe Daylight Saving Time, select DST : OFF (see "Clock" on pages 16 and 17).
- Keep these time changes in mind when programming the unit for timer recordings.

Features for a Quality Picture

Digital Auto Tracking
Continuously analyzes the signal and adjusts for optimum picture quality.

Manual Tracking Control (to reduce picture noise)
Use during Playback and Slow Motion mode to reduce picture noise. Press the 3 or 6 number key on the remote control or CH ▲▼ on the unit until the picture clears up. To return to Auto Tracking, press POWER off, then on again a few seconds later.

V-Lock Control
In Still mode, the 3 or 6 number key on the remote control or CH ▲▼ on the unit operate as a V-Lock control to reduce jitter.

PanaBlack™ Picture Tube
This unit uses a PanaBlack™ picture tube for better colour reproduction and picture contrast.

Specifications

Display

Picture Tube:	27 inch measured diagonal 100° deflection Picture Tube

VCR

Video Recording System:	4 rotary heads helical scanning system
Audio Track:	1 track (Normal) 2 channel (Hi-Fi Audio Sound)

Tuner

Broadcast Channels:	VHF 2 ~ 13, UHF 14 ~ 69
CABLE Channels:	Midband A through I (14 ~ 22) Superband J through W (23 ~ 36) Hyperband AA ~ EEE (37 ~ 64) Lowband A-5 ~ A-1 (95 ~ 99) Special CABLE channel 5A (01) Ultraband 65 ~ 94, 100 ~ 125

FM Radio

Band range:	87.5 ~ 108.1 MHz

General

Power Source:	120V AC, 60 Hz
Power Consumption:	Power On Approx. 170 watts Power Off Approx. 3.5 watts
Television System:	EIA Standard NTSC color
Speaker:	2 pieces
Operating Temperature:	5 °C ~ 35 °C (41 °F ~ 95 °F)
Operating Humidity:	10 % ~ 75%
Weight:	42 kg (92.4 lbs.)
Dimensions:	772(W) x 654 (H) x 550 (D) mm 30-3/8" (W) x 25-3/4" (H) x 21" (D)

Discs played

(1) DVD-VIDEO disc	5" (12 cm) single-sided, single-layer 5" (12 cm) single-sided, double-layer 5" (12 cm) double-sided, double-layer (one layer per side) 3" (8 cm) single-sided, single-layer 3" (8 cm) single-sided, double-layer 3" (8 cm) double-sided, double-layer (one layer per side)
(2) Compact disc (CD-DA, VIDEO CD)	5" (12 cm) disc 3" (8 cm) disc
(3) MP3	

Digital audio output:

Optical digital output:	Optical connector
Pickup:	Wavelength: 655 nm (DVD) 790 nm (Video CD/CD) Laser power: CLASS II

Note : Designs and specifications are subject to change without notice.

Disc formats supported by this unit

The unit can play back discs bearing any of the following marks:

DVD
3" (8 cm) disc / 5" (12 cm) disc

Video CD
3" (8 cm) disc / 5" (12 cm) disc

CD
3" (8 cm) disc / 5" (12 cm) disc

MP3

Discs which cannot be played with this unit

- DVD with Region No. other than "1" or "ALL"
- DVD of PAL system
- DVD-RAM
- DVD-ROM
- CD-ROM
- CDV
- CD-G
- **Do not try to play a Photo CD.**

is a registered trademark.

Definition of Terms

Angle
Some DVD discs feature scenes simultaneously shot from different angles. The ANGLE button can be used to view the scene from different angles. (ANGLE Indicator lights up on the unit when a scene recorded at different angles is detected.)

Chapter Number
Titles are subdivided into numbered sections. You can quickly search for a favorite scene using these numbers.

DVD
A high-density optical disc on which high-quality pictures and sound have been digitally recorded. DVD incorporates new video compression technology (MPEG II) and high-density recording technology which allow entire movies to be recorded with incredible playback quality.

Playback Control
With Video CD (version 2.0), scenes or information may be selected for viewing or listening from an interactive menu that appears on the TV screen.

Subtitles
Written dialogue which appears at the bottom of the screen.

Time Number
The elapsed play time from the start of a disc or title. Use to quickly find scenes. (May not work with some discs.)

Title Number
For DVD discs with two or more titles, the title is numbered as title 1, title 2, etc.

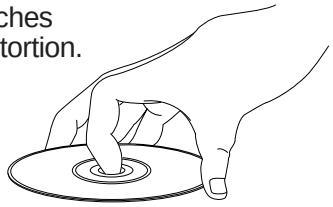
Track Number
Numbers assigned to tracks on Video CDs and CDs to allow specific tracks to be quickly located.

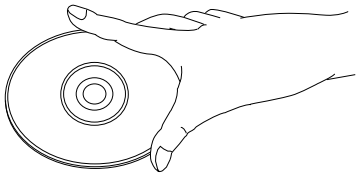
Video CD
CD containing picture and sound with same quality level as video tape. This unit also supports Video CDs with playback control (version 2.0).

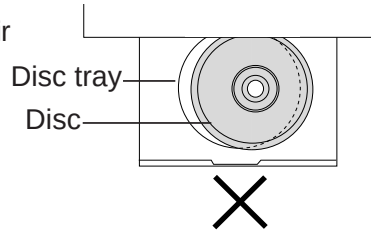
Disc Handling

Handling precautions

- Only hold disc by edges as shown. Fingerprints, dirt, and scratches can cause skipping and distortion.
- Do not write on label side of disc.
- Never use record cleaning sprays, benzine, thinner, static electricity prevention liquids, or any other solvent.
- Be careful not to drop or bend disc.
- Do not place more than 1 disc on disc tray.
- Do not try to close disc tray when disc is not properly placed.
- Always store discs in their proper cases when not in use.

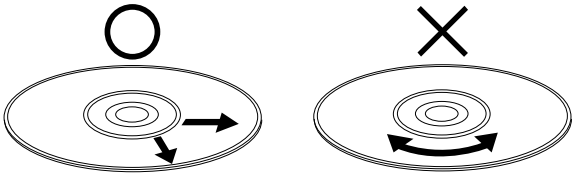






To clean disc surface

With a soft, damp (water only) cloth, gently wipe from the center hole to the outer edge as shown below. (Wiping in a circular pattern will scratch the surface.)



If disc is brought from a cold to a warm environment, moisture may form on the disc

Wipe away moisture with a soft, dry, lint-free cloth before using disc. (See above.)

Improper disc storage

Discs could be damaged if stored or left in areas:

- exposed to direct sunlight.
- that are humid or dusty.
- near heat (i.e. heater, radiator, etc.).

Apparatus Claims of U.S. Patent Nos. 4,631,603, 4,577,216, and 4,819,098, licensed for limited viewing uses only.

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Location of Controls

Remote Control Buttons

EJECT/OPEN/CLOSE
See next page.

POWER
Turns the unit on or off.

TV/VCR
Sets to TV/VCR mode.

MUTE
Mutes the sound instantly.

CHANNEL UP/DOWN
Selects a channel.

SURROUND
Creates a deeper, 3-D sound effect.

NUMBER Keys
Selects a channel directly.

ANGLE
Selects the desired angle in DVD mode.

AUDIO
Selects the desired audio mode.

TITLE
Selects the desired title by number on some DVDs.

SELECT ▲▼◀▶
Controls navigation around on-screen menu.

ACTION
Displays Main Menu.

SET
Sets a selected menu.

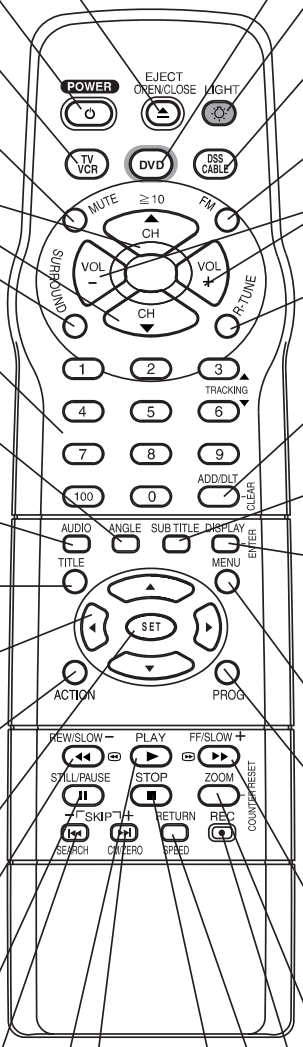
REW/SLOW-
Rewinds tape and searches reverse scene. Decreases slow motion speed in Still mode.

STILL/PAUSE
Pauses picture in Play mode and frame advance picture in Still mode.

SKIP⏮/SEARCH
Skips back one chapter or track. Goes to previous menu screen. Goes directly to the desired recording. Locates end point of recording.

PLAY
Begins playback.

SKIP⏭/CM SKIP/ZERO SEARCH
Skips one chapter or track. Goes to next screen. In Stop mode, goes to the counter "0:00:00". In Play mode, skips over 1 to 3 minutes of tape.



DVD
Sets to DVD mode.

LIGHT
See next page.

DSS/CABLE
Sets the remote to control some basic DDS or Cable box functions.

FM
Receives FM radio signal.

VOLUME UP/DOWN
Adjusts volume.

RAPID TUNE
Displays the last channel you were watching.

ADD/DELETE/CLEAR
Adds or deletes a channel. Cancels an item on the screen.

SUB TITLE
Selects a different subtitle language.

DISPLAY/ENTER
Displays the TV status and clock. In DVD mode, displays disc and unit information. In DSS or CABLE mode, it may be necessary after channel selection.

MENU
Displays DVD menu.

PROGRAM
Displays SET PROGRAM screen. You can set Timer Program and On-Timer.

FF/SLOW+
Fast forwards tape and forward visual search. Increases slow motion speed in Still mode.

ZOOM/COUNTER RESET
Enlarges specific portions of DVD picture. Resets to "0:00:00" at desired portion of tape.

REC
Records a program.

RETURN/SPEED
Returns to DVD menu screen. Selects recording speed of tape.

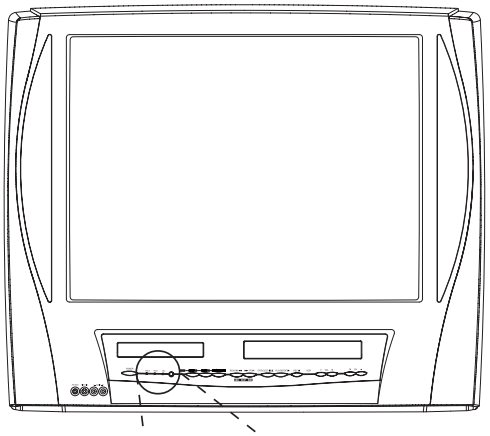
STOP
Stops recording or playback.

Universal Light Tower® Illuminated Remote Control

LIGHT button:
When LIGHT is pressed, (DVD, TV/VCR, DSS/CABLE, CH UP/DOWN, VOL UP/DOWN) buttons will light for 5 seconds for easy button location.
If no button is pressed in 5 seconds, the light goes out to conserve the batteries.

EJECT/OPEN/CLOSE button:
When this button is pressed in TV-VCR mode, the tape is ejected.
This button is inoperative if pressed during recording.
If pressed in DVD mode, the disc tray opens or closes.

Indicators on the Front Panel



Remote Sensor

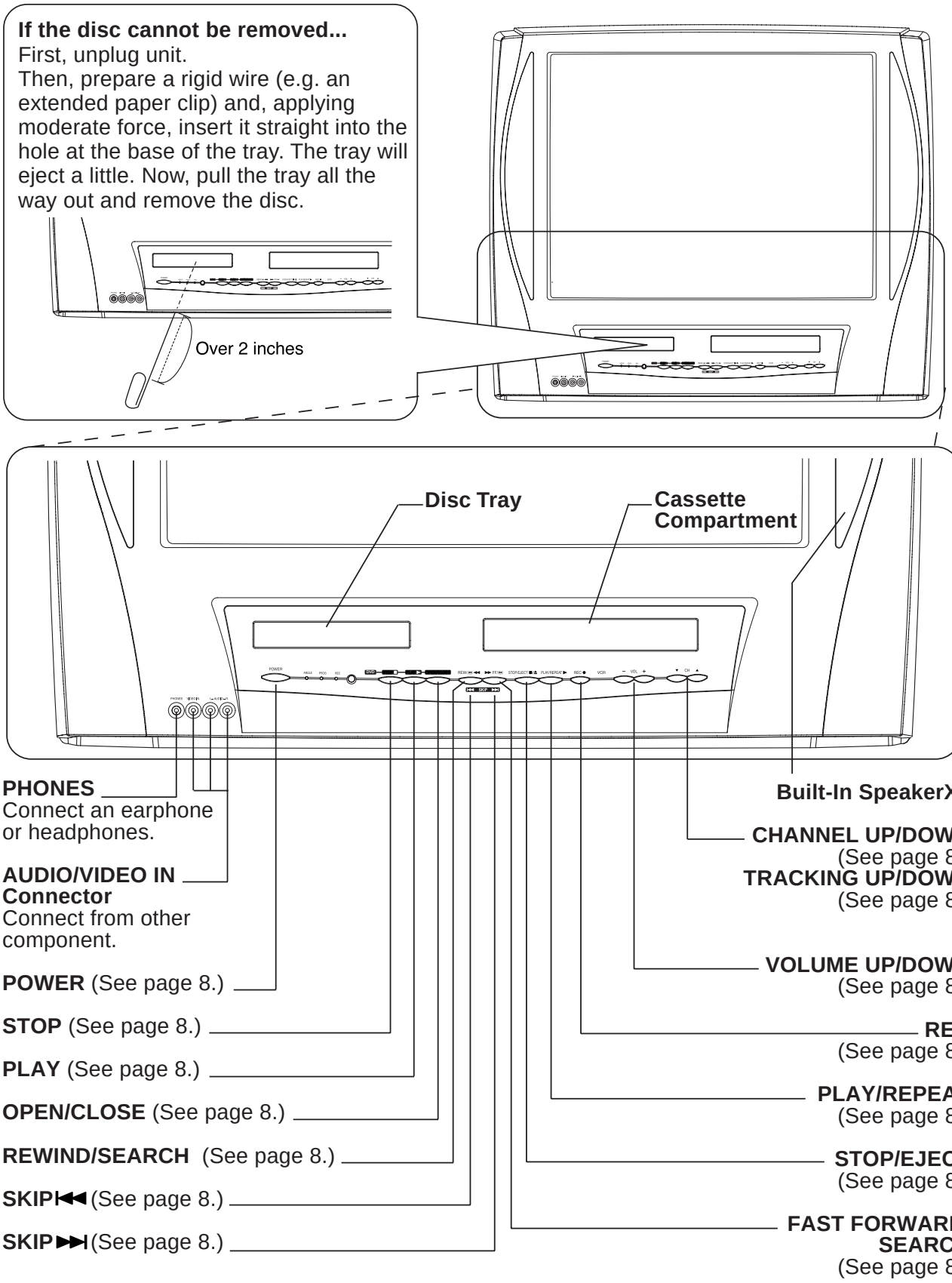
ANGLE Indicator
Lights up when a scene recorded at a different angles is detected. (DVD only).
Pg. 49

REC Indicator
Lights up during recording. In Rec Pause or OTR Pause mode, the Indicator flashes.
Pg. 18

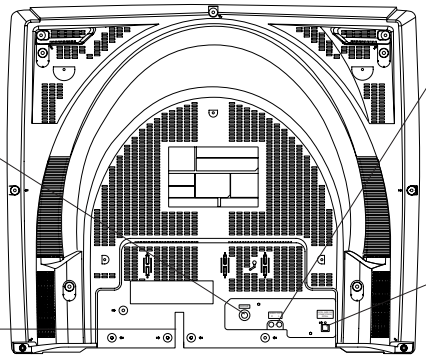
PROG TIMER Indicator
Lights up when the unit is set for Timer Recording. It flashes when a Timer Recording has been set with no tape inserted, the clock is not set, or the tape is in motion.
Pg. 30
Lights up when the On Timer is set.
Pg. 26

Location of Controls (continued)

Front View of the unit


If the disc cannot be removed...
First, unplug unit.
Then, prepare a rigid wire (e.g. an extended paper clip) and, applying moderate force, insert it straight into the hole at the base of the tray. The tray will eject a little. Now, pull the tray all the way out and remove the disc.
Over 2 inches
Disc Tray
Cassette Compartment
PHONES
Connect an earphone or headphones.
AUDIO/VIDEO IN Connector
Connect from other component.
POWER (See page 8.)
STOP (See page 8.)
PLAY (See page 8.)
OPEN/CLOSE (See page 8.)
REWIND/SEARCH (See page 8.)
SKIP⏮ (See page 8.)
SKIP⏭ (See page 8.)
Built-In SpeakerX2
CHANNEL UP/DOWN
(See page 8.)
TRACKING UP/DOWN
(See page 8.)
VOLUME UP/DOWN
(See page 8.)
REC
(See page 8.)
PLAY/REPEAT
(See page 8.)
STOP/EJECT
(See page 8.)
FAST FORWARD/ SEARCH
(See page 8.)

Rear View of the unit



Audio Output Connector (L/R)
Pg. 12

VHF/UHF Antenna Input Terminal
See below.

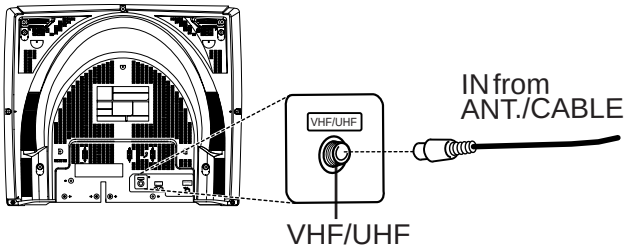
Optical digital audio output connector
Pg. 13

AC Power Plug
When plugged into an AC outlet, this unit consumes 3.5 W of electric power in OFF condition.

Connections

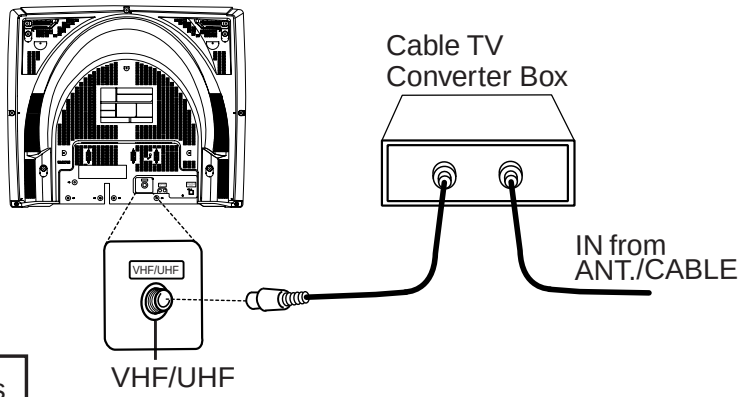
For ANT./Cable

Connect the cable from Antenna/Cable to the VHF/UHF terminal on the unit.



For DSS/Cable Box

Connect the OUT jack on your cable box to the VHF/UHF terminal on the unit with a RF cable.

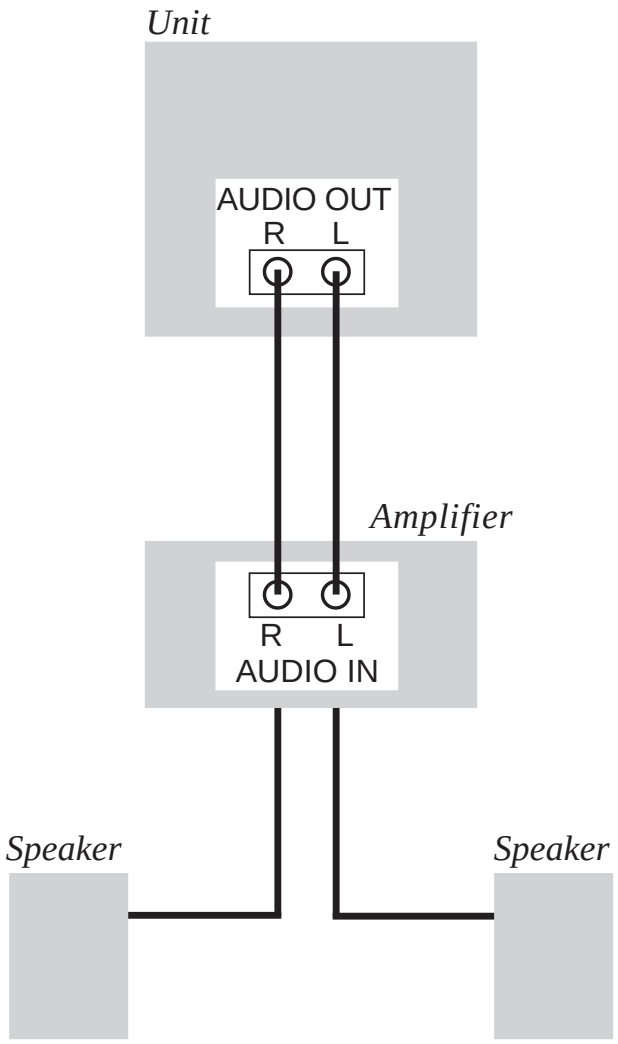


WARNING
Overtightening “Nut type” RF coaxial cables may damage jacks. Finger tighten only.

Connections (continued)

Audio connections

■ Unit ➔ Amplifier ➔ Speaker



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☑ Ready Checklist

- ☐ Turn down the volume, then turn this unit, as well as other equipment to be connected, off before proceeding with connection.
- ☐ Do not block ventilation holes of any of the equipment and arrange them so that air can circulate freely.
- ☐ Read through the instructions before connecting other equipment.
- ☐ Ensure that you observe the color coding when connecting audio and video cables.

Enjoying digital audio output from the digital audio output connector

Notes on audio output from the optical digital audio output connector

Disc	Sound recording format	Optical digital audio output from connector
DVD	Dolby Digital	Dolby Digital bitstream (1-5.1 ch) or OFF (no output)*1
	Linear PCM (48/96 kHz 16/20/24 bit)	Linear PCM (2ch) (48 kHz sampling/16 bit only)*2 or no output*1
	dts	Bitstream or no output*1
Video CD	MPEG 1	PCM (44.1 kHz sampling)
CD	Linear PCM	Linear PCM (44.1 kHz sampling)
MP3	MP3	Linear PCM (It depends on the MP3 file)

*1 The type of audio output from the connector can be selected by the Settings for DVD Operation. (See page 59.)

*2 Sound having 96 kHz sampling is converted into 48 kHz sampling when it is output from the unit’s optical digital audio output connector.

For your reference:

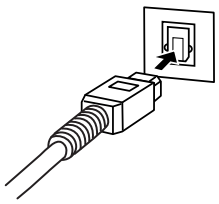
- Dolby Digital is a digital sound compression technique developed by the Dolby Laboratories Licensing Corporation. Supporting 5.1-channel surround sound, as well as stereo (2-channel) sound, this technique enables a large quantity of sound data to be efficiently recorded on a disc.
- Linear PCM is a signal recording format used in CDs. While CDs are recorded in 44.1 kHz/16 bit, DVDs are recorded in 48 kHz/16 bit up to 96 kHz/24 bit.
- If you have a Dolby Pro Logic Surround decoder, you will obtain the full benefit of Pro Logic from the same DVD movies that provide full 5.1 channel Dolby Digital soundtracks, as well as from titles with the Dolby Surround mark. For information on Panasonic or Technics Dolby Pro Logic Surround Sound Decoders please contact your local dealer.

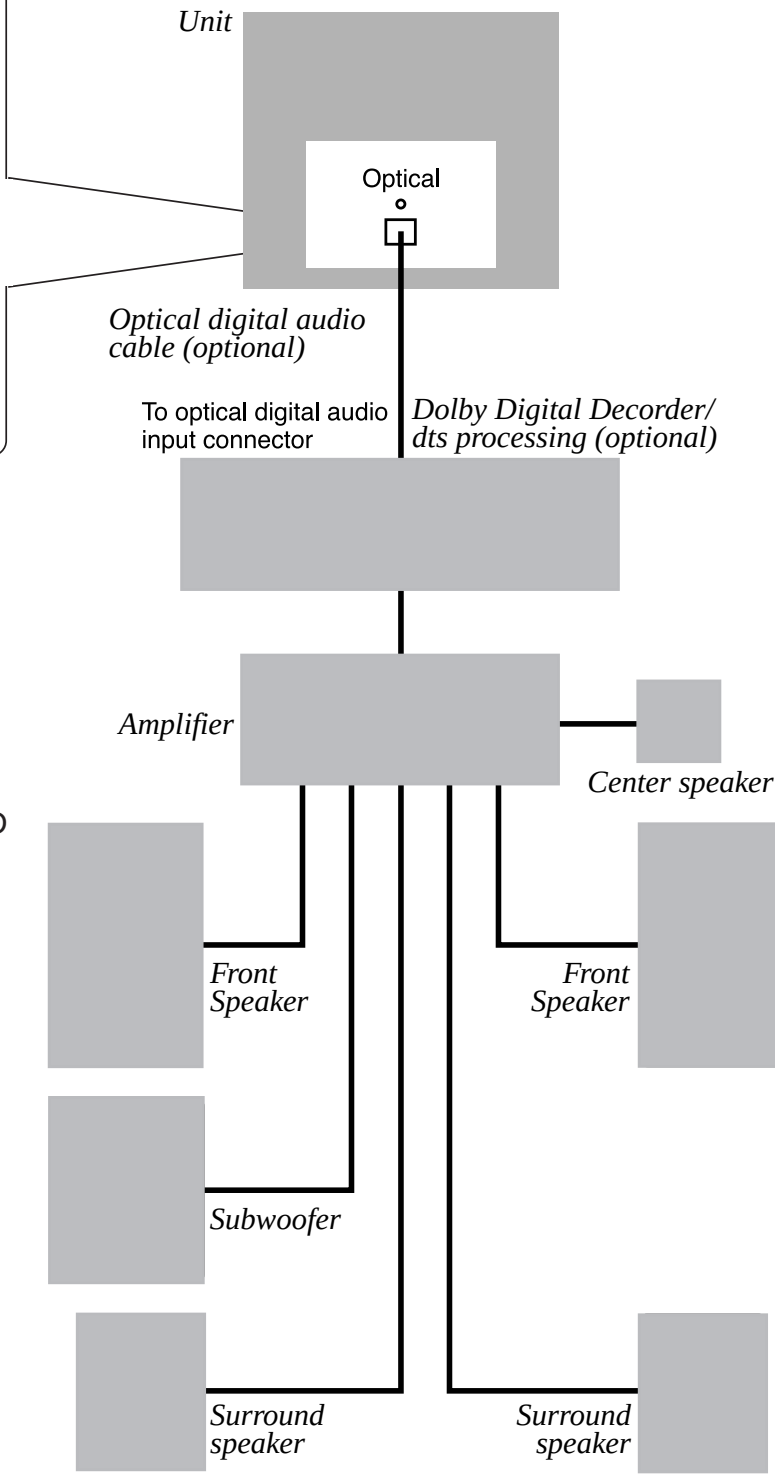
■ Unit ➛ Dolby Digital Decoder ➛ Amplifier ➛ Speaker
or
Unit ➛ dts (digital theater systems) Decoder ➛ Amplifier ➛ Speaker

When DVDs recorded in Dolby Digital or dts are played, Dolby Digital bitstream or dts bitstream is output from the unit Optical digital audio output connector. When the unit is connected to a Dolby Digital decoder or dts decoder, you can enjoy theater-quality audio in your home. [An optical digital audio cable (optional) is required when an optional Dolby Digital decoder or dts decoder is used.]

Notes on connecting an Optical digital audio cable (optional)

- Firmly connect the cable to the connector.





IMPORTANT NOTE:

Caution for optical digital audio output connector:

- When connecting an amplifier (with an Optical digital input connector) which does not contain the Dolby Digital or dts decoder, be sure to select “OFF” at “Dolby Digital” and “OFF” at “dts” of the Settings for DVD Operation “AUDIO OUTPUT” (see page 59). Otherwise, any attempt to play DVDs may cause such a high level of noise that it may be harmful to your ears and damage your speakers.
- When a dts decoder is connected, please select “Bitstream” at “dts” of the Settings for DVD Operation “AUDIO OUTPUT”. If “OFF” is selected, there will be no sound. (See page 59).
- Video CDs and CDs can be played as normal.

Note:

- Some dts decoders which do not support DVD-dts Interface may not work properly with the unit.

Initial Setup (Ready to Play)

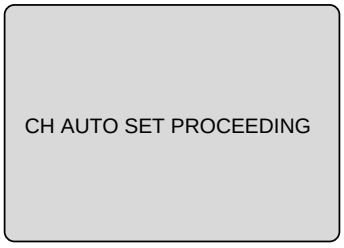
Please make all cable or antenna connections before powering on.

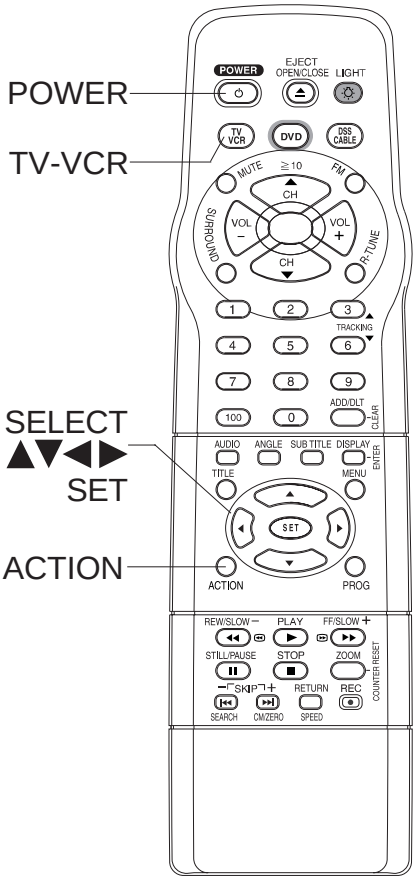
Initial Setup (Ready to Play)

Press TV/VCR on the remote for TV-VCR mode.

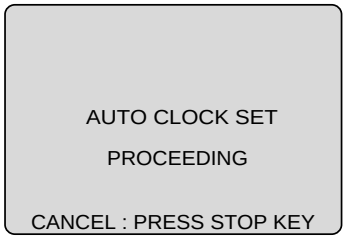
1 Plug the unit power cord into an AC wall outlet.

2 Press POWER* on the remote or unit. The unit comes on and auto channel and clock set starts.

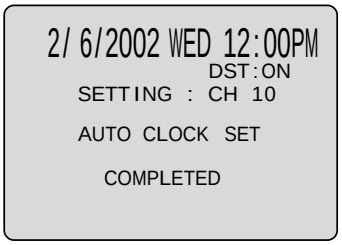




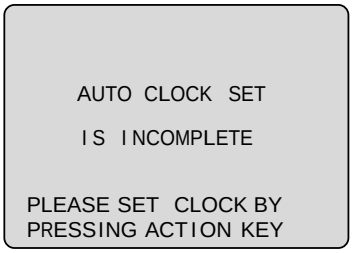
- If you use a cable box, turn it on and set it to the Public Broadcasting Service (PBS) channel in your time zone. If you use a DSS receiver, it must be turned off.



3 Settings are made automatically. When setup is done, this screen appears.



If AUTO CLOCK SET IS INCOMPLETE screen appears, set the clock using MANUAL CLOCK SET procedure on next page.

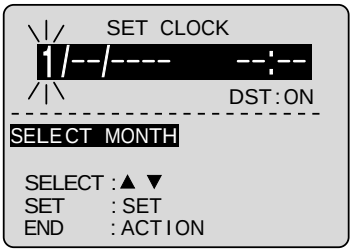


*Important: If a remote control button does not work when pressed, press the TV/VCR button on the remote and try the button again.

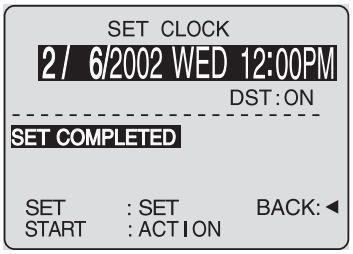
Manual Clock Set

If AUTO CLOCK SET was incomplete, manually set the clock as follows.

1 **Press ACTION** on the Remote to display SET CLOCK Menu screen.



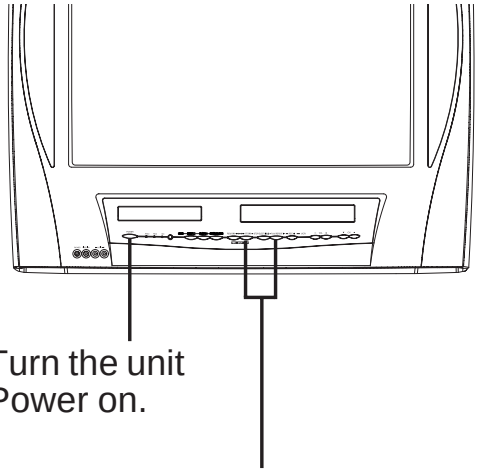
2 **Press ▲▼** to select the month and **press SET** to set. In the same manner, select and set the date, year, time, and DST. (Daylight Saving Time)



3 **Press ACTION** twice to start CLOCK and exit.

Reset all unit Memory Functions

When moving unit to a new location, or if a mistake was made in the Initial Setup section.
• Make sure a tape is not inserted in the unit.



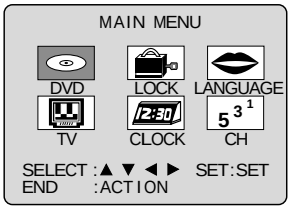
1 Turn the unit Power on.

2 Press and hold both **PLAY** and **FF** on the unit for more than 5 seconds.
• The power will shut off.
• Please ignore “NO CASSETTE” warning.

3 Perform “Initial Setup” on page 14.

Note to CABLE system installer:
This reminder is provided to call the CABLE (Cable TV) System Installers attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Reset Language, Channels, Clock,

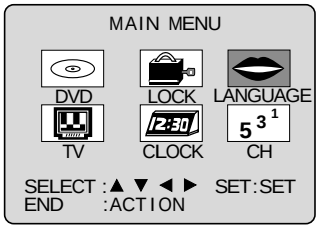
1 

Press ACTION*
to display MAIN MENU.

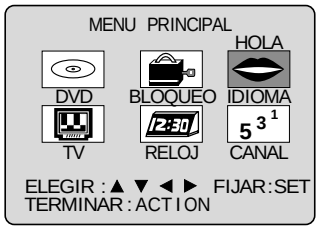
2

■ Language

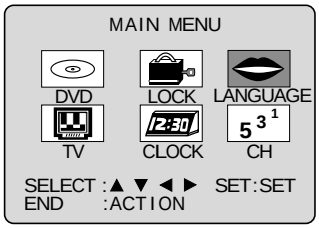
1) **Press ▲▼◄►** to select language icon.



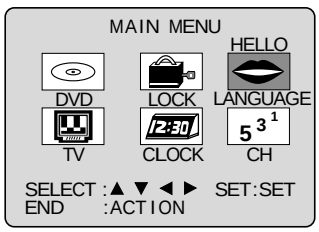
2) **Press SET** repeatedly.



For Spanish



For French

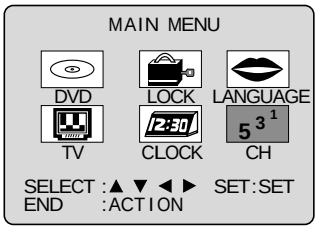


For English

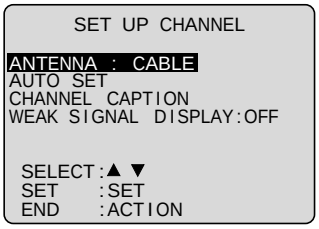
3) **Press ACTION** to exit.

■ Channels

1) **Press ▲▼◄►** to select “CH.”



2) **Press SET.**



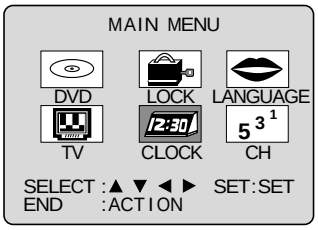
3) **Press ▲▼** to select “ANTENNA,” then **press SET** to set your antenna system (“TV” or “CABLE”).

4) **Press ▲▼** to select “AUTO SET,” then **press SET**.

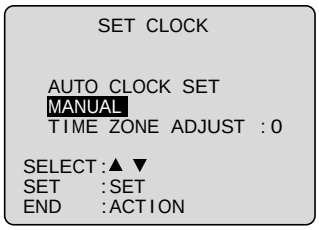
- After Channel Auto Set is finished, Clock Auto Set will be performed. (If clock is set manually, Clock Auto Set will not be performed.)

■ Clock

1) **Press ▲▼◄►** to select “CLOCK.”



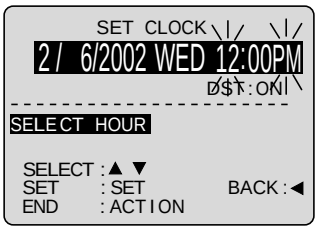
2) **Press SET**.



(“TIME ZONE ADJUST” appears only when auto clock is set.)

3) **Press ▲▼** to select “MANUAL,” then **press SET**.

(For Auto Clock Set, select “AUTO CLOCK SET,” and **press SET**.)



<Example MANUAL CLOCK SET screen>

Continued on the next page.

Time Zone Adjust

***Important:** If a remote control button does not work when pressed, press the TV/VCR button on the remote and try the button again.

4) **Press ▲▼** and **press SET** to select and set the month, date, year, time, and DST (Daylight Saving Time).

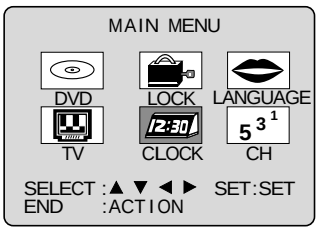
To Make Corrections, repeatedly press ◀▶ to move to error, then correct.

5) **Press ACTION** twice to start the clock and exit this mode.

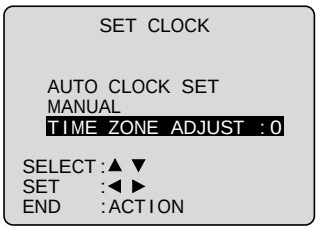
■ Time Zone Adjust

(Only when Auto Clock is set.)

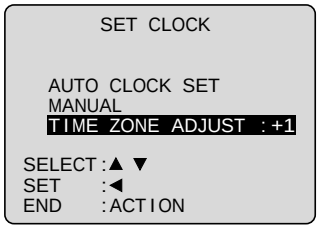
1) **Press ▲▼◀▶** to select "CLOCK."



2) **Press SET**.

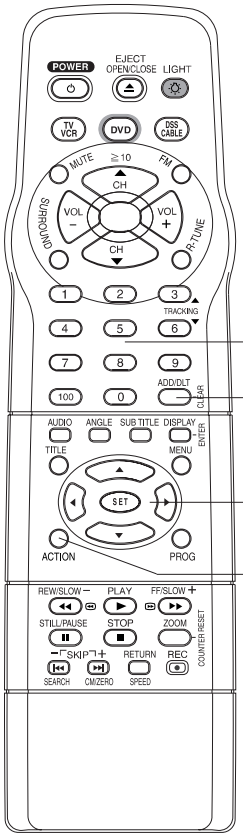


3) **Press ▲▼** to select "TIME ZONE ADJUST" and **press ◀** or **▶** to subtract or add hour(s) as necessary.



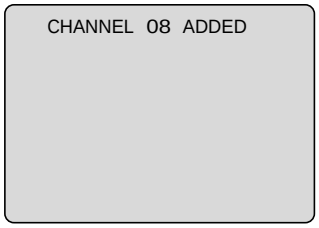
4) **Press ACTION** twice to exit.

- "TIME ZONE ADJUST" returns to "0" if clock is set manually.

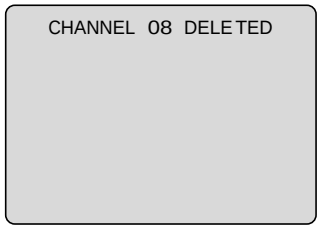


Add or Delete a Channel

To add channel:
Select channel with **number keys** and **press ADD/DLT**.



To delete channel:
Select channel with CH ▲▼ or **number keys** and **press ADD/DLT**.

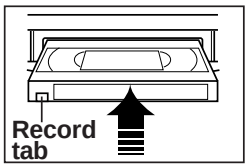


Playback a Tape

Ready Checklist

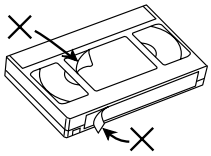
☐ All connections are made.
☐ Your unit is plugged in.

1 **Insert a tape.**



- The unit power comes on automatically.

To prevent tape jam, remove loose or peeling labels from tapes.



2 **Press PLAY*** to play a tape.

- If tape has no record tab (see page 4), auto play begins.

■ **Forward/Reverse scene search**
➔ **Press FF/SLOW+** or **REW/SLOW-**.
➔ **Press** again or **PLAY** to release.

■ **Still (Freeze) picture**
➔ **Press STILL/PAUSE**.
➔ **Press PLAY** to release.

■ **Slow Motion picture**
➔ **Press FF/SLOW+** (increases speed) or **REW/SLOW-** (decreases speed) in Still mode.
➔ **Press PLAY** to release.

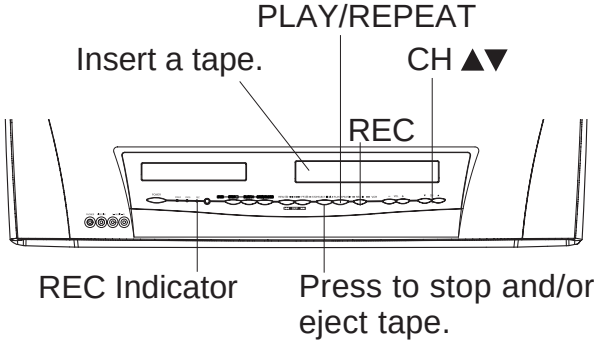
■ **Frame by Frame picture**
➔ **Press STILL/PAUSE** in Still mode.
➔ **Press PLAY** to release.

Notes

- These features work best in SP or SLP mode.
- After the unit is in Still or Slow mode for 3 minutes, it will switch to Stop mode automatically to protect the tape and the video head.

■ **Stop ➔ Press STOP**
■ **Rewind tape ➔ Press REW/SLOW-** in Stop mode
■ **Fast forward tape ➔ Press FF/SLOW+** in Stop mode
■ **Eject tape ➔ Press EJECT** on the remote or **STOP/EJECT** on the unit

Operation using unit buttons



Record On a Tape

1 **Insert a tape with record tab.**

- The unit power comes on automatically.

2 **Press CH ▲▼** or **number keys** to Select Channel.

- For “LINE” input, see bottom of next page.

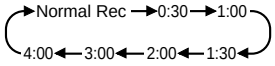
3 **Press SPEED** to select recording speed (see page 4).
SP = Standard Play
LP = Long Play
SLP = Super Long Play

- Selected speed is displayed.

4 **Press REC** to start recording.

- To edit out unwanted portions, **press STILL/PAUSE** to pause and resume recording.
- You cannot view another channel during recording.

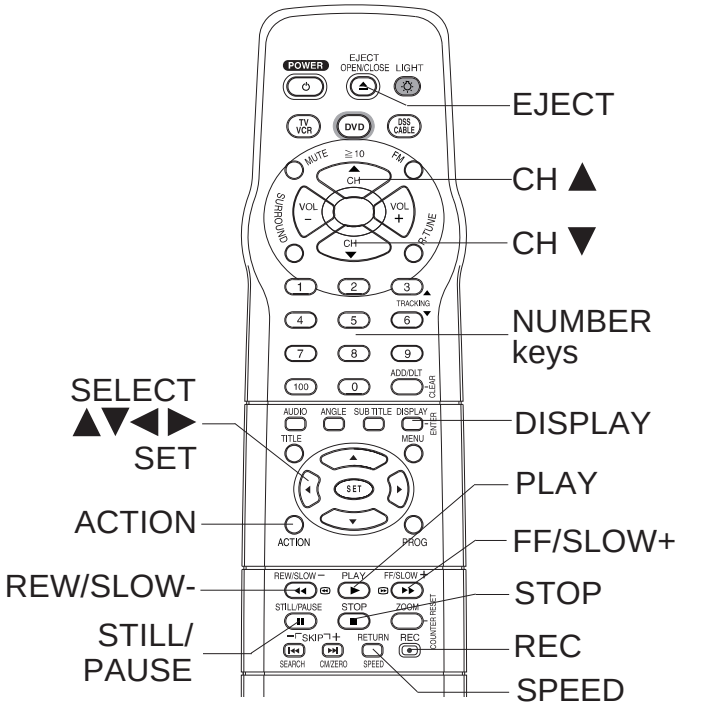
■ **Stop ➔ Press STOP**
■ **One Touch Recording (OTR)**
Press REC repeatedly to set the recording length (30 min - 4 hours.)



- The unit stops recording at a preset time.
- PROG TIMER Indicator lights on the unit.

Notes

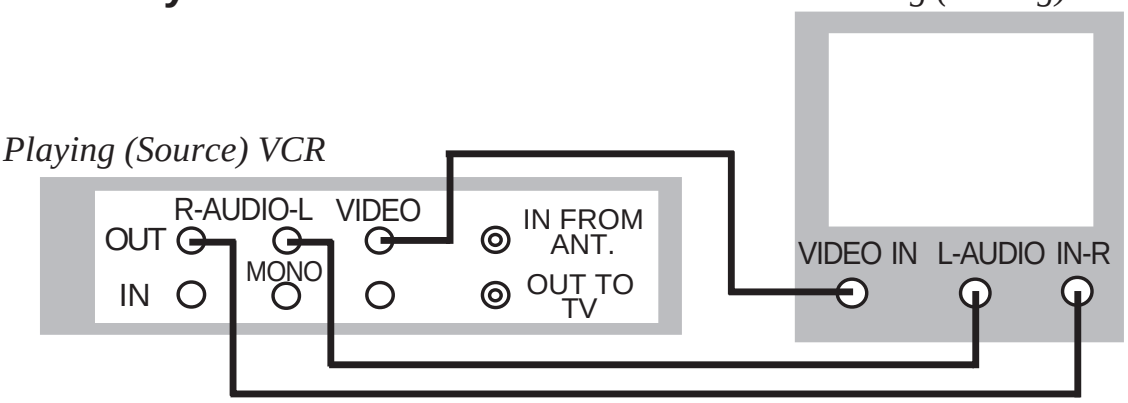
- **It is not possible to record from DVD/ Video CD/CD to VHS tape using this unit.**
- After the unit has been in Rec Pause mode for 5 minutes, it will stop automatically to protect the tape and the video head.
- The remaining recording time of an OTR can be displayed by pressing DISPLAY.

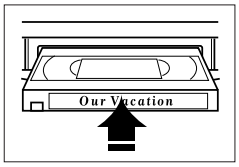
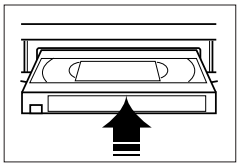


Copy Your Tapes (Dubbing)

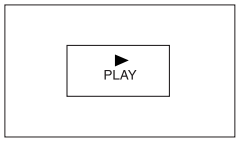
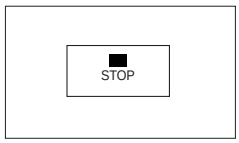
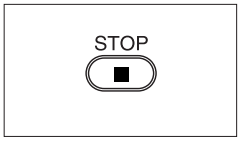
***Important:** If a remote control button does not work when pressed, press the TV/VCR button on the remote and try the button again.

Connections you'll need to make



Playback (Source)	Recording (Editing) unit
1  **Insert pre-recorded tape.**	 **Insert blank tape with record tab.** • Dubbing tapes protected with Copy Guard will have poor quality results.
2 ———	**Select "LINE" mode.** See "Selecting Input Mode" below.
3 **Press PLAY** then **PAUSE** at starting point to put in Standby mode.	**Press REC**, then **Press STILL/PAUSE** immediately to put in Standby mode.

— (Perform operation of steps 4 and 5 on both units at same time.) —

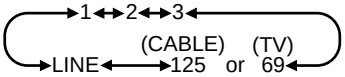
4  **Press PLAY** to start dubbing.	**Press STILL/PAUSE** to start dubbing.
5  **Press STOP** to stop dubbing.	 **Press STOP** to stop dubbing.

Caution

- Unauthorized exchanging and/or copying of copyrighted recordings may be copyright infringement.
- Please note that some tapes cannot be dubbed on this unit. Also, it is not possible to dub DVD/Video CD/CD to VHS tape using this unit.

Selecting Input Mode

Method 1:
Press CH ▲▼. The display will change as follows.

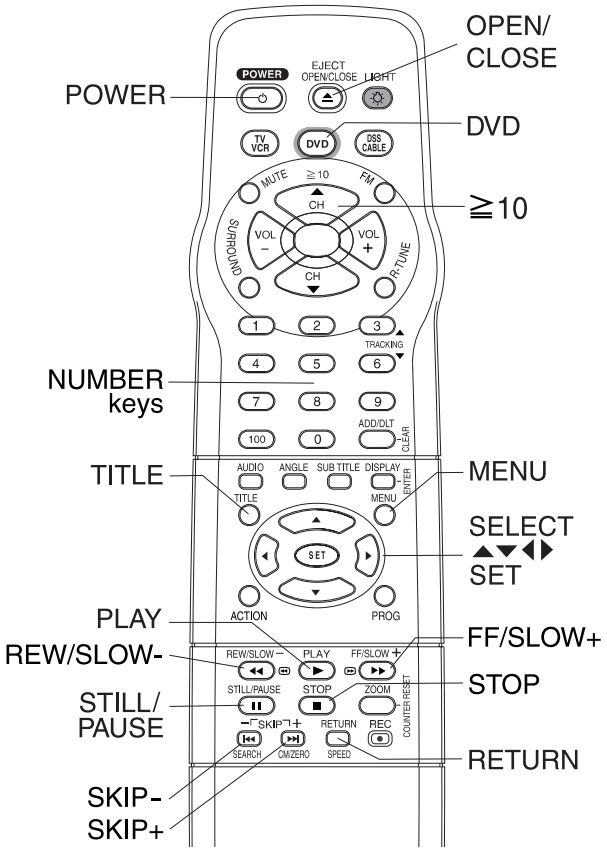


Method 2:
a Press ACTION for MAIN MENU.
b Press ▲▼◄► to select "TV", then **press SET** for SET UP TV screen.
c Press ▲▼ to select "INPUT SELECT," and then **press SET** to select "TUNER" or "LINE."
d Press ACTION twice to exit this mode.

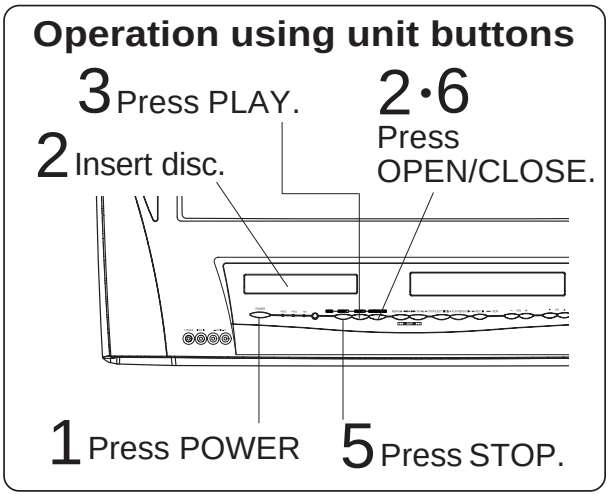
Basic DVD Operation

Ready Checklist

- ☐ All connections are made. (See pages 11-13.)
- ☐ Your unit is plugged in.
- ☐ If unit is connected to an audio amplifier, turn the stereo system's power on.



Operation using unit buttons



*1 Interactive DVD...
May include multiple camera angles, stories, etc.

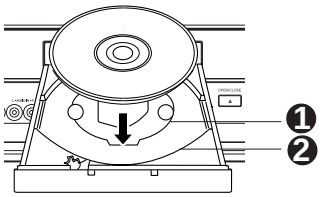
*2 Video CD with playback control...
Particular scenes or information can be interactively selected from a menu that appears on the screen.

1 Press POWER* on the remote or unit.

2 Insert a disc.

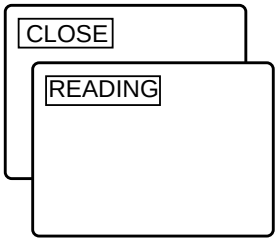
- If a disc is already inserted, go to step 3. (Depending on the disc, playback may start automatically.)

1) **Press OPEN/CLOSE**.
2) Place disc into disc tray.



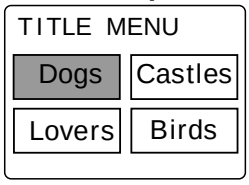
- Hold disc by its edges only (page 7) with printed side up and use guides to place into tray. Use ❶ 3"(8 cm) or ❷ 5" (12 cm) disc.

3 Press PLAY to start play.
Disc tray closes automatically.



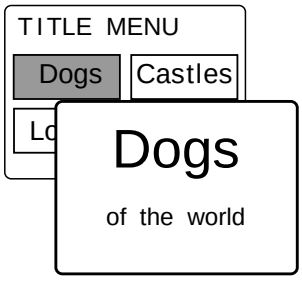
- You may also close the tray by **pressing OPEN/CLOSE**.
- Data reading time differs with each disc.

<Example>



If an interactive DVD*1 or a Video CD with playback control*2 is used and a TITLE MENU appears, go to step 4.

4



Press ▲▼◀▶ or number key(s) (see below) to select title and **press SET** to play.

Using number key(s) starts play automatically.

<Example>

<Example> 1 digit number 1 ••• 1
2 digit number 12 ••• ≧10➔1➔2
3 digit number 123 •••100➔1➔2➔3

Press SKIP ▶▶| or |◀◀ to go to next or previous menu screen.

- SKIP function not available with all discs. Please refer to disc jacket for operation information.

To return to MENU (play stops)
Press TITLE, **MENU**, or **RETURN**. (DVD)
Press RETURN. (Video CD)

5 Press STOP to stop play.

6 Press OPEN/CLOSE to eject the disc.

*Important: If a remote control button does not work when pressed, press the DVD button on the remote and try the button again.

■ Forward/Reverse rapid scene search

➛ **Press FF/SLOW+** or **REW/SLOW-** during play.

➛ **Press PLAY** to release.

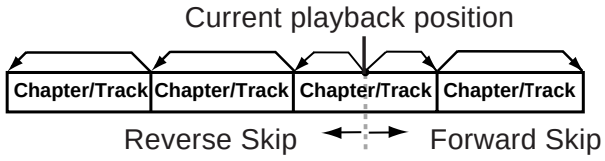
- Starting forward/reverse search during play started from menu on Video CDs may recall menu.
- Search speed, slow at first, increases with each additional press of the button up to 5 levels.

■ Forward/Reverse Chapter/Track Skip

➛ **Press SKIP ▶▶|** or **|◀◀** during play. Each **press skips** a chapter (DVD) or track (Video CD/CD).

Pressing |◀◀ SKIP once midway through a chapter/track returns to start of that chapter/track. Each additional press skips back one chapter/track.

- **Pressing SKIP ▶▶|** or **|◀◀** during play started from menu on Video CDs may recall menu.



■ Still (Pause) Picture

➛ **Press STILL/PAUSE** during play.

➛ **Press PLAY** to release.

- **DVD/Video CD :** The unit will enter Still picture mode.
- **CD :** The unit will enter Pause mode.

■ Frame by Frame picture (DVD/Video CD)

➛ **Press STILL/PAUSE** in Still mode.

➛ **Press PLAY** to release.

- Each press advances picture one frame.
- Hold down for consecutive frame advance.
- Whether pictures are advanced by “FRAME” or “FIELD” is selected automatically (see page 60).

■ Slow Motion picture (DVD/Video CD)

➛ **Press FF/SLOW+** or **REW/SLOW-** (DVD only) in Still mode.

➛ **Press PLAY** to release.

- Slow motion speed, slow at first, is increased with each additional press of the button up to 5 levels.
- Reverse slow motion is not available for video CDs.

- When ⃠ appears on the screen while a button is being pressed, it means that the corresponding operation is prohibited by the unit or the disc.

RESUME function

The unit memorizes the point where STOP is pressed (▶ flashes on screen).
Press PLAY to resume play from this point.
Pressing STOP again or opening the tray cancels RESUME, however, RESUME is not canceled when power is turned off and on.

- RESUME works only with discs for which elapsed play time is displayed during play.

Auto-Power Off function

Power turns off after unit has been in Stop mode (DVD) for about 5 minutes.

Enjoy Video CDs featuring playback control without using menus (Video CDs only)

1. Do steps 1-3 (previous page). When menu appears, **press STOP**.
2. **Press number key(s)** to select desired track (play begins).
   - Check disc for track numbers.
   - Press “1” to start at beginning of disc.

To Resume Menu use,
Press STOP, and **press PLAY**, then the menu appears. Now, go to step 4 (previous page).

Notes

- Please read the disc jacket for operation information.
- If a single sided disc is placed in upside down, “PLEASE CHECK THE DISC, AND FOR STAINS OR SCRATCHES ON DISC” is displayed.
- Remove disc and press unit POWER off when not in use.
- Disc continues to rotate with menu displayed even after play is done. Press STOP to clear menu display when finished with menu.

TV Operation

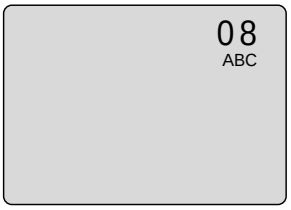
***Important:** If a remote control button does not work when pressed, press the TV/VCR button on the remote and try the button again.

1 Press POWER* on the remote or unit.

Ready Checklist

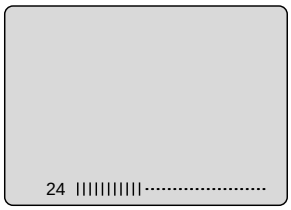
- ☐ All connections are made. (See page 11).
- ☐ Your unit is plugged in.

2

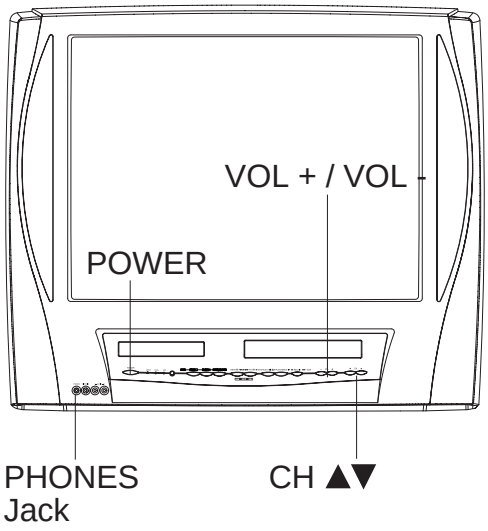


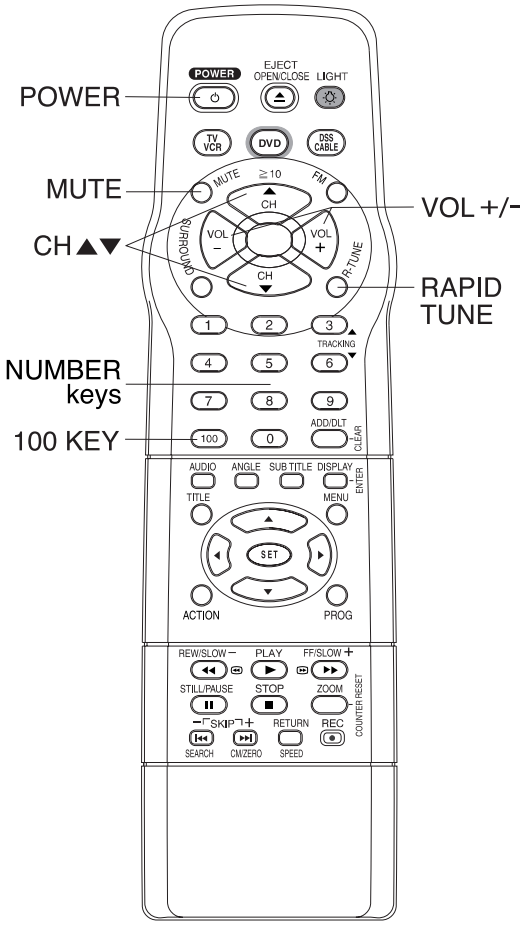
Use CH ▲▼ or **number keys** to select a channel.

3



Press VOL + or **VOL -** to adjust volume.





■ Using the 100 key

When selecting CABLE channels 100 to 125 with the number keys, first press the 100 key, and then enter the remaining two digits.

■ Rapid Tune

Press R-TUNE to display the last channel you were watching.

■ Audio Mute

Press MUTE to instantly mute the sound.
Press again to restore the previous sound level.

■ Phones

Connect an earphone (not supplied) or headphones (not supplied) to the Phones Jack.

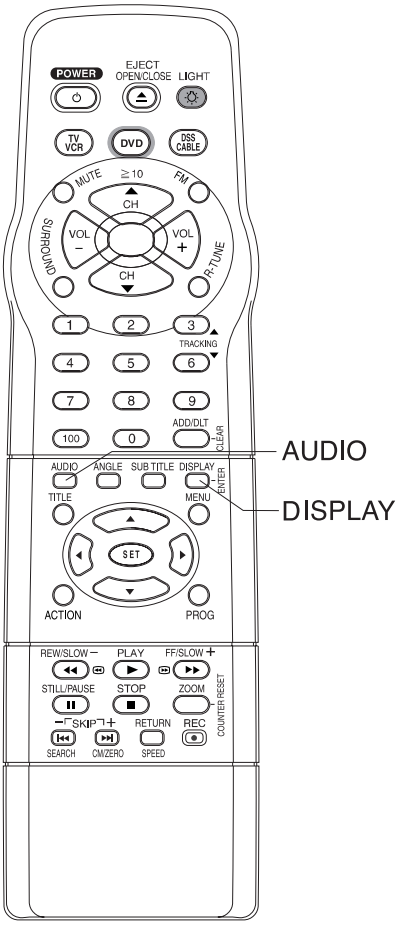
MTS Broadcast/TV Stereo System

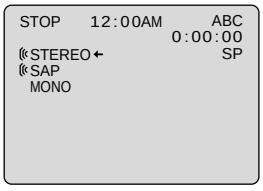
Equipped with dbx® -TV Noise Reduction for true MTS reproduction. dbx® -TV Noise Reduction is required for good stereo separation and audio fidelity. dbx® is a registered trademark, and is licensed by dbx® Technology Licensing.

Receivable Broadcast Types

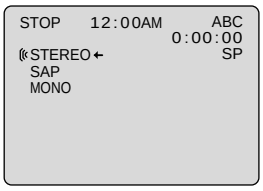
The following are possible audio broadcast types and on-screen displays. The signal being received is indicated with an " ((" mark while the selected audio mode is indicated with an arrow. To change the audio mode for these broadcasts, see the "Select Audio Mode for TV Viewing" section (below.)

Press DISPLAY to display the broadcast signal being received.

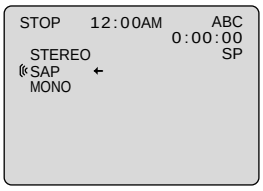




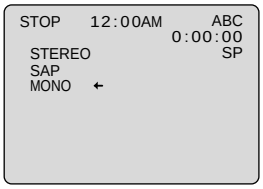
MTS Stereo and SAP broadcast
Multi-channel Television Sound Stereo (main language) and Secondary Audio Program (sub language) broadcasts are being received simultaneously.
Select the STEREO or SAP audio mode.



MTS Stereo broadcast
Multi-channel Television Sound Stereo broadcast. Select STEREO audio mode.
- If stereo broadcast is weak and the display flickers, select MONO audio mode for possible improvement.



SAP broadcast
Secondary Audio Program (sub language).
Select SAP audio mode for the sub language.

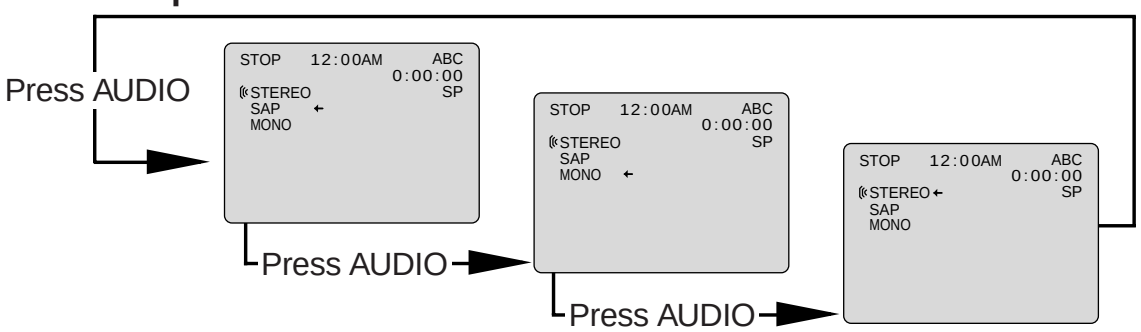


MONO broadcast
Normal monaural sound broadcast.

Audio Mode for TV Viewing

Press AUDIO to select the desired audio mode as described above.
(Arrow shows selection.)
- Each press of AUDIO will change the audio mode as shown below.
- "SAP" is selected with first press of AUDIO.

< Example >



TV Operation

Closed Caption System

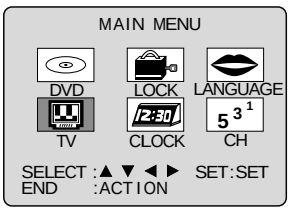
Closed Caption is ...

This multi-use system not only allows the hearing impaired to enjoy selected programs, but also makes useful information from TV stations available to everyone.

Closed Caption Mode Feature

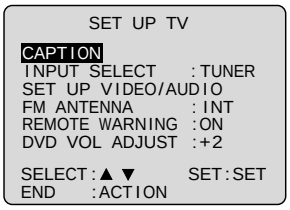
1 **Press ACTION*** to display MAIN MENU.

2



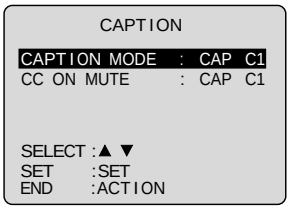
1) **Press ▲▼◄►** to select "TV."
2) **Press SET** to display SET UP TV screen.

3

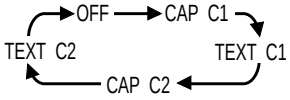


1) **Press ▲▼** to select "CAPTION".
2) **Press SET** to display CAPTION screen.

4



1) **Press ▲▼** to select CAPTION MODE.
2) **Press SET** repeatedly to select mode. (See left.)



5 **Press ACTION** three times to return to the normal screen.

Recording and Playing Back a Closed Caption/ Text Program

Record : Record normally. Closed Caption/ Text signal, if present, is recorded automatically.

Playback : Start playback. Perform above steps to select desired caption mode.

Closed Caption Mode Selections

Caption Mode: CAP C1 or C2
A narration of selected TV programs is displayed.
Check TV program listings for CC (Closed Caption) broadcasts.

Caption Mode: TEXT C1 or C2
Most of the screen will be blocked out. When the TV station broadcasts information, such as program listings, it will appear in this space.

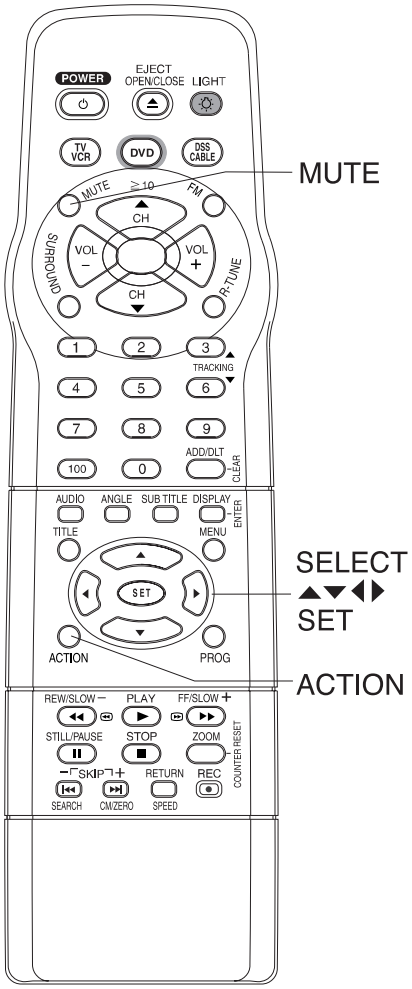
Caption Mode: OFF
Closed Caption /Text narration will not be displayed.

NOTE :
The closed caption or text signal may be broadcast over C1, C2, or both. Also, text contents can vary so you may wish to try different settings.

*Important: If a remote control button does not work when pressed, press the TV/VCR button on the remote and try the button again.

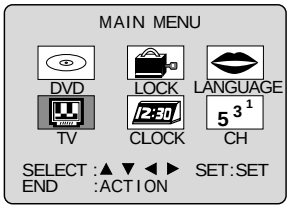
Caption On Mute Feature

Closed Caption narration, if available, is displayed when MUTE button is pressed for silence.



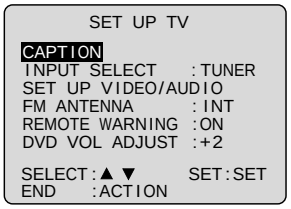
1 **Press ACTION** to display MAIN MENU.

2



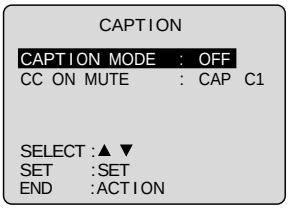
1) **Press ▲▼◀▶** to select “TV.”
2) **Press SET** to display SET UP TV screen.

3



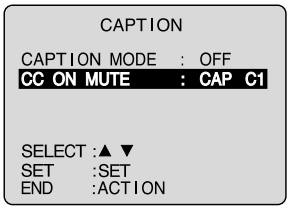
1) **Press ▲▼** to select “CAPTION”.
2) **Press SET** to display CAPTION screen.

4

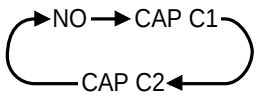


1) **Press ▲▼** to select CAPTION MODE.
2) **Press SET** repeatedly to select “OFF.”

5



1) **Press ▲▼** to select CC ON MUTE.
2) **Press SET** repeatedly to select desired mode.



- Each press of **SET** will change the display as shown left.
- The caption may be broadcast over CAP C1 or C2.

6 **Press ACTION** three times to return to the normal screen.

7 **Press MUTE** to mute the sound and display closed captioning.
- To cancel, press MUTE again.

Note

- When a disc supporting closed caption is used, the subtitle and the closed caption may overlap. In this case, turn the subtitle or caption on mute mode off. (See page 48.)

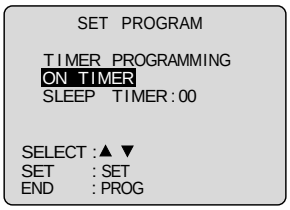
TV Timer Features

ON-TIMER with Alarm

This unit can be set to automatically power on in one of 4 modes (TV, VCR Playback, FM radio, or DVD/Video CD/CD.) You can also combine the On-Timer with a one minute alarm that gradually increases in volume.

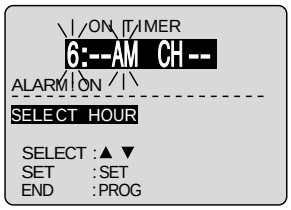
1 **Press PROG*** to display SET PROGRAM screen.

2



1) **Press ▲▼** to select "ON TIMER."
2) **Press SET** to display ON TIMER screen.

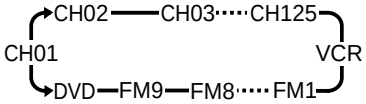
3



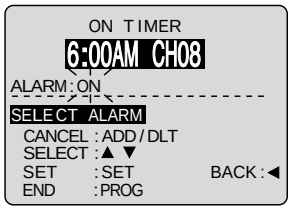
1) **Press ▲▼** to select desired settings.
2) **Press SET** to set the ON-TIMER TIME or ON-TIMER mode.

- Make sure a tape is inserted if Playback mode is selected.
- Make sure a disc is inserted if DVD (DVD/Video CD/CD) mode is selected.
- See "FM Radio" on pages 28 and 29 for instructions on how to preset FM stations.

• ON-TIMER mode selection order



4



Press ▲▼ to select ALARM "ON" or "OFF."

When "ON" is selected,
an alarm will gradually increase in volume for one minute or until canceled by pressing any button (including VOL + -).

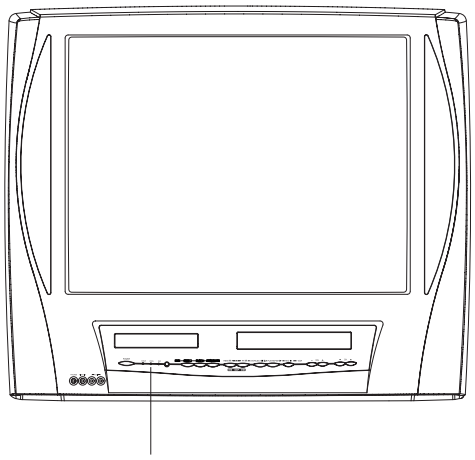
To Make Corrections,
use ▲▼ and ◄► to move back and correct.

5 **Press PROG** to set ON TIMER.
- "ON TIMER SET" is displayed.
- PROG TIMER Indicator lights up on the unit.

To Cancel ON-TIMER,
Repeat steps **1** and **2**. Then, **press ADD/DLT** to clear the time in step **3**. Now, **press PROG** to end.
"ON TIMER END" briefly appears on-screen.

Ready Checklist

☐ The clock is set to correct time.



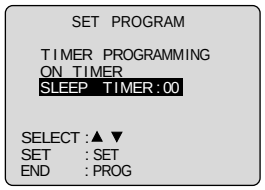
PROG TIMER Indicator

Sleep Timer

This unit can be set for auto power off.

1 **Press PROG** to display SET PROGRAM screen.

2



1) **Press ▲▼** to select SLEEP TIMER.
2) **Press SET** repeatedly to select the desired time.

SLEEP TIMER 30→60→90→00

To cancel,
press SET repeatedly until 00 appears.

3 **Press PROG** to return to the normal screen.
- **Pressing DISPLAY** with sleep timer set displays remaining time.

Note

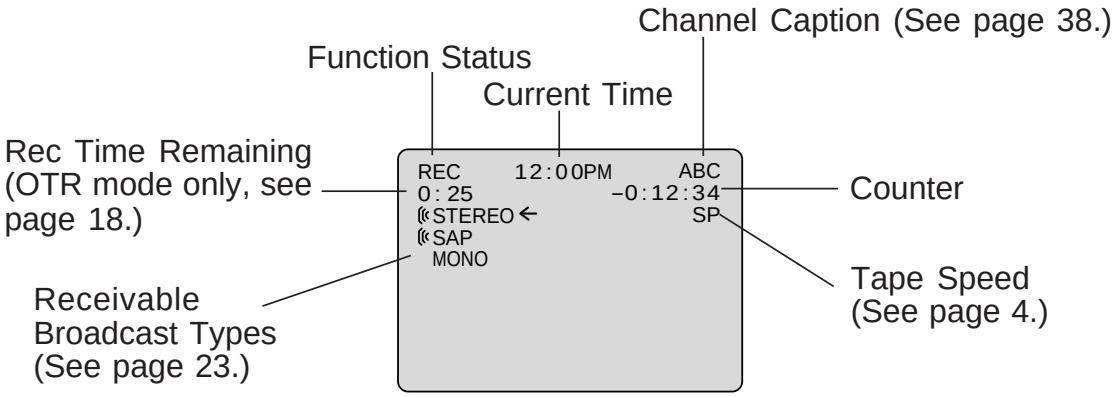
If no button on the remote or unit (including a button used to turn off the alarm) is pressed within 60 minutes after unit turns itself on, it will turn itself back off.

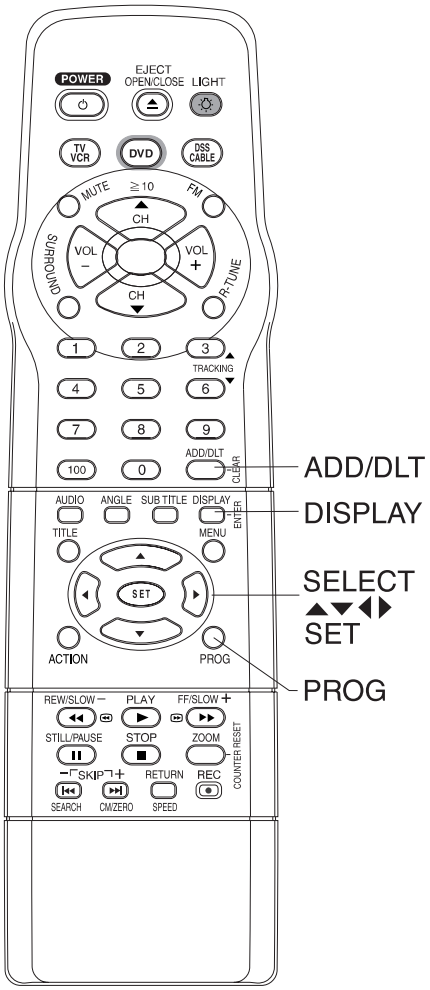
On-Screen Display (OSD)

***Important:** If a remote control button does not work when pressed, press the TV/VCR button on the remote and try the button again.

TV/VCR Status & Clock Display

Press DISPLAY
to display or remove the overlay.



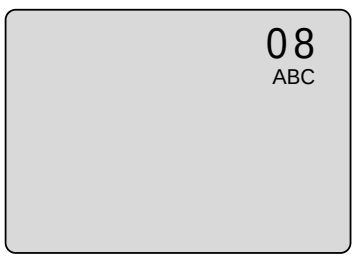


Blue Screen Display

Whenever a blank section of a tape comes up in Play mode, or when the selected channel has no broadcast signal with the Weak Signal Display Feature set to “OFF” (see page 39), the screen will turn solid blue.

Channel & Function Display

When a function button is pressed (PLAY, FF, etc.) or you change channels, the unit mode or channel number will be displayed. (Some station names may also appear if Channel Caption is set. See page 38.)

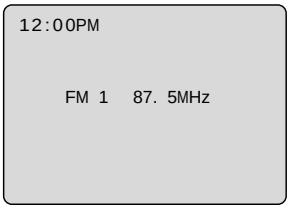


FM Radio

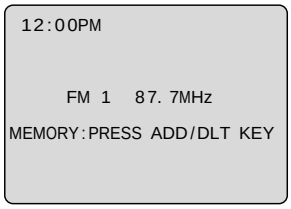
FM Radio is ...
This unit has an FM radio with built-in antenna, 9 station preset, and a band range of 87.5 ~ 108.1 MHz. You can even set the On-Timer (page 26) to wake up to your favorite radio station.

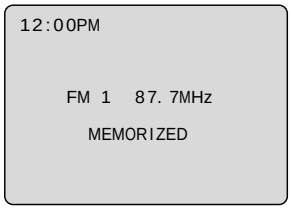
FM Radio Setup

1 **Press FM** on the remote to display FM radio mode.

2 

Press a number key* (1~9) to select the FM preset number.

3 



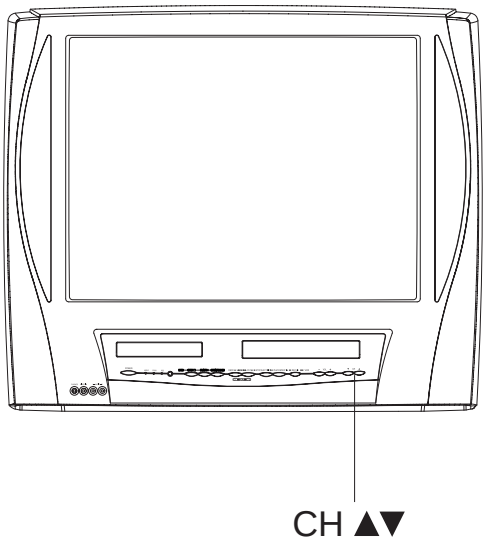
To Make Corrections, select station with a number key, then do step **3** again.

To exit FM mode, press TV/VCR or **DVD** on the remote.

1) **Press CH ▲▼** to select the desired radio station. (Each press changes frequency by 200 KHz.)
2) **Press ADD/DLT** to set the radio station.

Hold down CH ▲ or **▼** for a few seconds, then release to quickly scan for FM stations in your area.

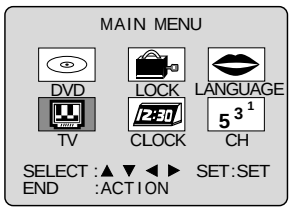
- To cancel, **press CH ▲** or **▼** while in search mode.



FM Antenna Setup

Make sure FM tuning is done correctly (see FM Radio Setup).

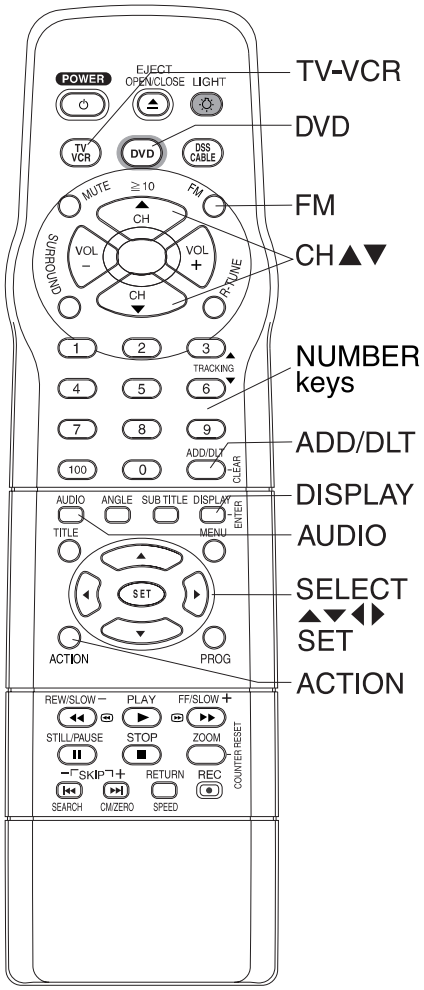
1 **Press ACTION** to display MAIN MENU.

2 

1) **Press ▲▼◄►** to select "TV."
2) **Press SET** to display SET UP TV screen.

Continued on next page.

*Important: If a remote control button does not work when pressed, press the FM button on the remote and try the button again.



3

```
        SET UP TV
CAPTION
INPUT SELECT    :TUNER
SET UP VIDEO/AUDIO
FM ANTENNA      :INT
REMOTE WARNING  :ON
DVD VOL ADJUST  :+2

SELECT:▲ ▼      SET:SET
END     :ACTION
```

1) **Press ▲▼** to select FM ANTENNA.
2) **Press SET** to select “INT (INTERNAL)” or “EXT (EXTERNAL)” to determine which one sounds best.

■ **For cable TV users**
➔ **“INT”**
■ **For antenna users**
➔ **“EXT”**

4 **Press ACTION** twice to end setup.

Using FM Radio

1 **Press FM** on the remote to display FM radio mode.

2

```
12:00PM

    FM 1   87. 5MHz
```

Press a number key (1~9) to select a preset FM number (see FM Radio Setup on page 28).

To exit FM mode,
press TV/VCR or DVD on the remote.

Audio Mode for FM Radio

```
12:00PM

(STEREO ←
 MONO
    FM 1   87. 7MHz
```

Press AUDIO repeatedly to select “STEREO” or “MONO” in FM Radio mode.

TV Operation

Notes

- FM radio cannot be recorded on a Video cassette.
- You may get better reception by repositioning the unit.
- You cannot select FM Radio mode during playback or record, or while a blue back screen (PROG, ACTION, MENU) is displayed.
- Once stations are set, the selected station and current time are displayed when FM Radio mode is entered.
  To remove time, press DISPLAY. If DISPLAY is pressed again, the unit status screen appears.

Timer Recording

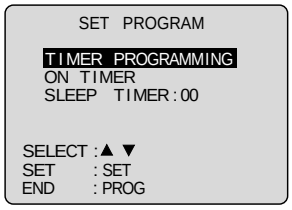
You can set up to 8 programs to be recorded while you are away.

Ready Checklist

- ☐ All connections are made.
- ☐ Your unit is plugged in.
- ☐ The clock is set to correct time.
- ☐ The tape is long enough.
- ☐ The record tab is in place.

1 **Press PROG*** to display SET PROGRAM screen.

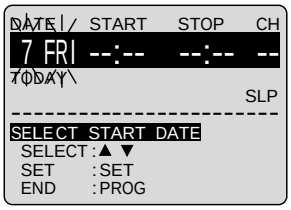
2



1) **Press ▲▼** to select TIMER PROGRAMMING.
2) **Press SET** to display screen.

- If a program is already in memory, **press ▲▼**, and **SET** to select an unused program number.

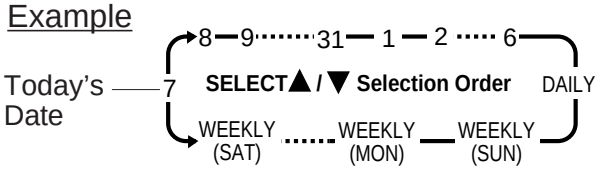
3



Press ▲▼ to select and **SET** or **◀ ▶** to set the recording DATE.

- 1~31 = One time
- DAILY = MON~FRI
- WEEKLY SUN~SAT = Same time once a week

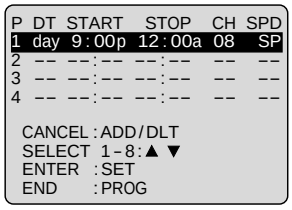
Example



Repeat step 3 to set:

- Start time, stop time
- Channel (or LINE for outside source)
- Speed (SP, LP, SLP)

4

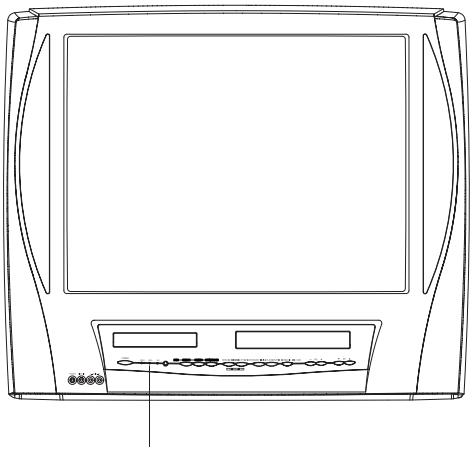


Press PROG to end the program.

To Enter More Programs, press ▲▼ to select and **SET** to set a blank program number, and then repeat step 3.

5 **Press PROG** twice to exit this mode.

- If you're using a cable box, make sure that it is tuned to the desired channel and the power is left on for timer recording.
- PROG TIMER Indicator lights up on the unit.



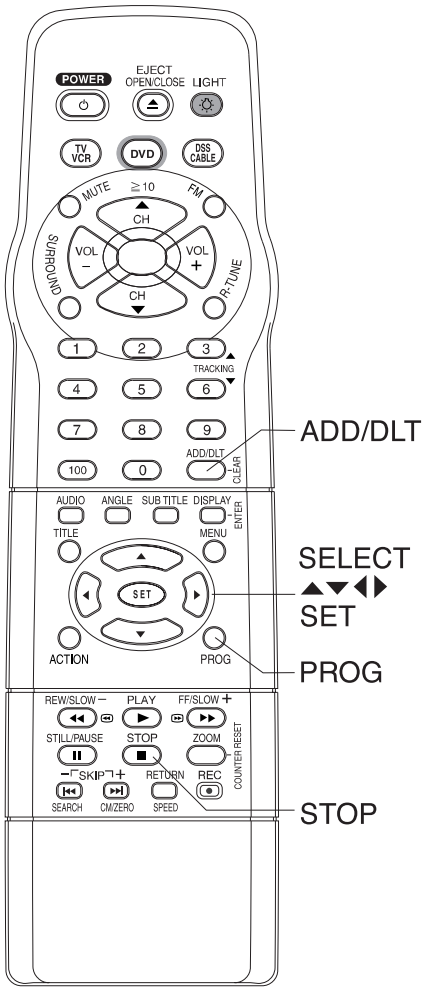
PROG TIMER Indicator

*Important: If a remote control button does not work when pressed, press the TV VCR button on the remote and try the button again.

Cancel a Timer Recording: (Recording is in progress)

Hold down STOP for a few seconds to cancel the Timer Recording.

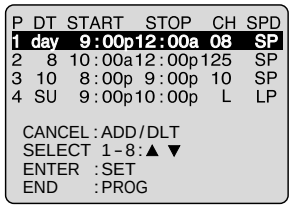
- Any future daily or weekly recordings will be performed as programmed.



Review, Replace or Clear Program Contents : (Recording is not in progress)

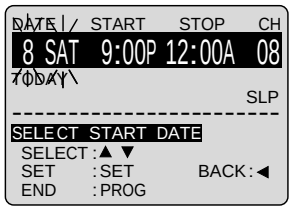
1 Repeat steps 1 and 2 on page 30.

2



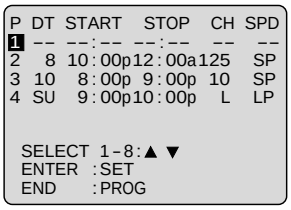
Press ▲▼ to select the desired program.

3 To Replace program...



1) **Press SET** to display.
2) **Press ▲▼** to select and **press SET** or **◀▶** to set new program contents.
3) **Press PROG**.

To Clear program...



Press ADD/DLT.

4 Press PROG twice to exit this mode.

Notes

- 2 minutes before Timer recording is performed, "PLEASE PREPARE FOR TIMER REC" appears and/or the PROG TIMER Indicator flashes. Be sure a cassette with record tab is loaded and the unit is in Stop mode.
- If the start times of two programs overlap, the lower numbered program will have priority.
- If the start time for a Timer Recording comes up during a normal recording or One Touch Recording (page 18), the Timer Recording will not be performed.
- If there is a power interruption of more than one minute, the recording may not be performed or continued.
- If "INCOMPLETE" appears after all items have been set, check all entries and make necessary corrections.

Cable Box Universal Remote Control Feature

Universal Remote Control is...

The Remote Control may be set up to control some basic DSS or Cable box functions.

The Universal Remote Control Setup

1 Find your DSS box or Cable box Brand Code Number from one of the charts on the next page.

2 Setup remote.

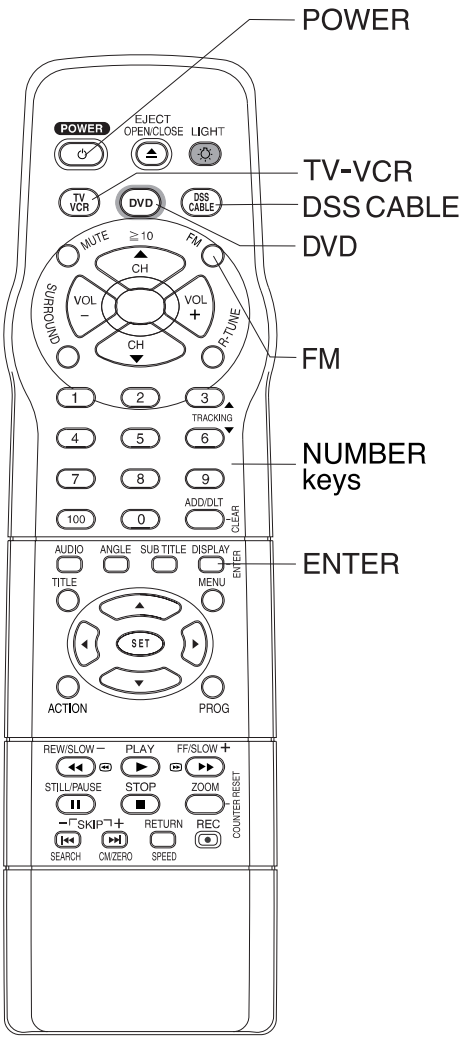
Hold down DSS CABLE and **press number keys** to enter code.

- If code number is 100 or greater, e.g., press 1 - 0 - 2 for 102.

3 Confirm code entry.

Press POWER* to turn selected unit ON or OFF.

- See below for controllable functions in each mode.



Notes

- Please repeat the Universal Remote Control Setup after replacing remote control batteries.
- The remote control will not operate all DSS receivers or Cable Boxes made by the manufacturers listed. If you get no results, your particular brand cannot be controlled.

Using the Universal Remote Control (Available Buttons / Functions)

Once the remote control has been properly set up, you can select TV-VCR, FM, DVD, DSS or CABLE mode depending on which functions you wish to control.

Press TV VCR, FM, DVD or DSS CABLE on the remote control to select the desired mode. (See below for buttons available in each mode.)

Set to TV VCR, FM, DVD:

All TV functions, as well as functions of TV-VCR, FM, or DVD.

Set to DSS CABLE:

- Basic VCR functions, e.g. PLAY, REC, etc.
- CABLE/DSS function, e.g. POWER, ENTER, NUMBER keys (except 100 key), CH UP/DOWN.

*Important: If a remote control button does not work when pressed, press the TV/VCR, DVD, FM button on the remote and try the button again.

DSS Brand Code Numbers

Toshiba 90
Hitachi/ Hughes 91, 99
Primestar 92
Drake 93
Magnavox 94, 95
Uniden 94, 95
Optimus 94, 95
Panasonic 96
ProScan 97
RCA 97
SONY 98, 105

Cable Box Brand Code Numbers

Archer 44, 06, 01, 120, 05, 63, 126
Cableview 29, 09, 01, 63, 120, 44, 42, 30, 52, 04, 124, 126
Citizen 44, 52, 30, 63, 42, 04, 124, 126
Curtis 08, 09, 25, 61, 53, 87
Century 44, 51, 75, 59, 126
Cabletenna 29, 09, 01, 63, 120, 44, 126
Cable Cinema 29, 09, 01, 63, 120, 44, 126
Diamond 29, 09, 01, 63, 120, 44, 126
Eagle 62, 40, 22, 13, 58, 20, 26, 107
Eastern 28, 29, 130
Explorer 08, 09, 25, 61, 53, 87
Gemini 30, 04, 124
General Electric 01, 57, 120
General Instruments 01, 84, 83, 34, 03, 02, 04, 55, 65, 66, 67, 68, 120, 106, 121, 122, 115, 117, 118, 124
Gerrard 44, 51, 75, 59
GC Electronics 44, 42, 63, 29, 30, 52, 04, 124, 126
Hamlin 41, 14, 15, 28, 102, 104, 103, 130
Hitachi 31
Jerrold 01, 84, 83, 34, 03, 02, 04, 55, 65, 66, 67, 68, 120, 106, 121, 122, 115, 117, 118, 124
Jasco 30, 04, 124
Macom 31
Magnavox 26, 112
Matsushita 17, 16, 08, 87, 109
Movietime 32, 39, 42, 44, 126, 38, 40
Maestro 74, 35
NEC 40, 19, 38, 32
NSC 40, 19, 38, 32
Novavision 08, 09, 25, 61, 53, 87
Next Level 01, 84, 83, 34, 03, 02, 04, 55, 65, 66, 67, 68, 120, 106, 121, 122
Oak 46, 11, 129, 101
Oak Sigma 46, 11, 129, 101
Panasonic 17, 16, 08, 87, 109
Philips 23, 24, 20, 13, 07, 50, 128, 129
Pioneer 06, 05, 12
Pulsar 04, 42, 63, 44, 30, 52, 124, 126
Quest 06, 05, 12
Radio Shack 44, 51, 75, 59, 126
RCA 17, 16, 08, 87, 109
Realistic 44, 51, 75, 59, 126
Recoton 44, 51, 75, 59, 126
Regal 41, 14, 15, 28, 102, 104, 103, 130
Regency 28, 29, 130
Rembrandt ... 44, 42, 63, 29, 01, 32, 39, 120, 126
Samsung 42, 06, 32, 05, 40
Scientific Atlanta 08, 09, 25, 61, 53, 87
Sheritech 27
Signal 26, 112
SL Marx 42, 06, 32, 40, 43, 44, 52, 63, 126
Sprucer 17, 16, 08, 87, 109
Standard Components 32, 39, 42, 44, 126
Stargate 04, 42, 32, 40, 63, 44, 30, 52, 06, 124, 126
Sylvania 19, 18
Teknika 74, 35
Telecaption 77, 127
Teleview 40, 19, 38, 32, 42, 06
Texscan 19, 18
Tocom 34, 33, 01, 42, 66, 120
Toshiba 36
Unika 44, 42, 63, 29, 01, 126, 120
Universal 52, 43, 44, 63, 42, 126
Viewstar 62, 40, 22, 13, 58, 20, 26, 107
Videoway 07, 23, 50, 129
Vidtek 64
Zenith 07, 23, 50, 129

Notes

- In DSS or CABLE mode, it may be necessary to press ENTER after pressing number keys for channel selection.
- In DSS or CABLE mode, POWER, CH Up/Down, Number Keys, ACTION, PROG, DISPLAY/ENTER, SEARCH/SKIP-, R-TUNE, SELECT, SET, CM SKIP/ZERO/SKIP+, COUNTER RESET/ZOOM, ANGLE, AUDIO, TITLE, SUB TITLE, MENU, or ADD/DLT are not available. Press TV/VCR, FM, DVD to use these functions.
- Depending on your DSS receiver or Cable box brand, some of the functions listed may not be remote controllable.
- Some DSS receiver or Cable box brands require you to turn on the power manually.
- Due to changes in infra-red commands used by manufacturers, some brands have several codes. If your unit does not respond to the first code, please try the next one.

Tape Operation

Search System is ...

Each time a recording is made, an invisible index mark is placed on the tape.
When timer recordings are made, program index and information are also included.
These index marks can be used to access or scan recordings.

Index Search

Go directly to the desired recording.

1

INDEX SEARCH

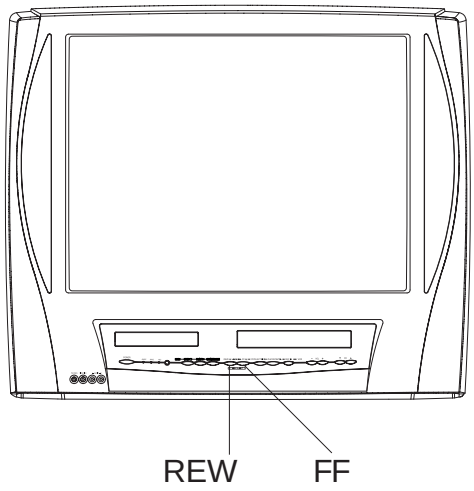
ENTER INDEX NUMBER:1
USING 1-9 KEYS

FORWARD SEARCH:FF
REVERSE SEARCH:REW
NEXT : SEARCH
EXIT : STOP

Press SEARCH* in Playback or Stop mode to display INDEX SEARCH screen, and then **press number keys** to select the recording number.

- To calculate number, see below.

Press FF or **REW** to start search.



2

INDEX SEARCH

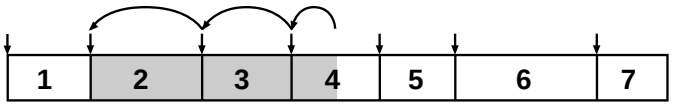
FORWARD SEARCH:FF
REVERSE SEARCH:REW

Play begins at search end.
To search forward or back 1 index, **press FF** or **REW** while screen left is displayed (10 seconds).

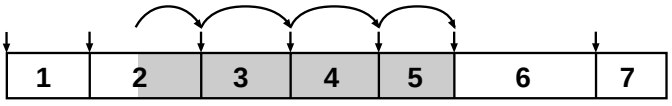
To cancel, press PLAY or **STOP.**

■ To calculate the Index Number

Example 1:
To go to rec. 2 from rec. 4, enter 3 and press REW.



Example 2:
To go to rec. 6 from rec. 2, enter 4 and press FF.

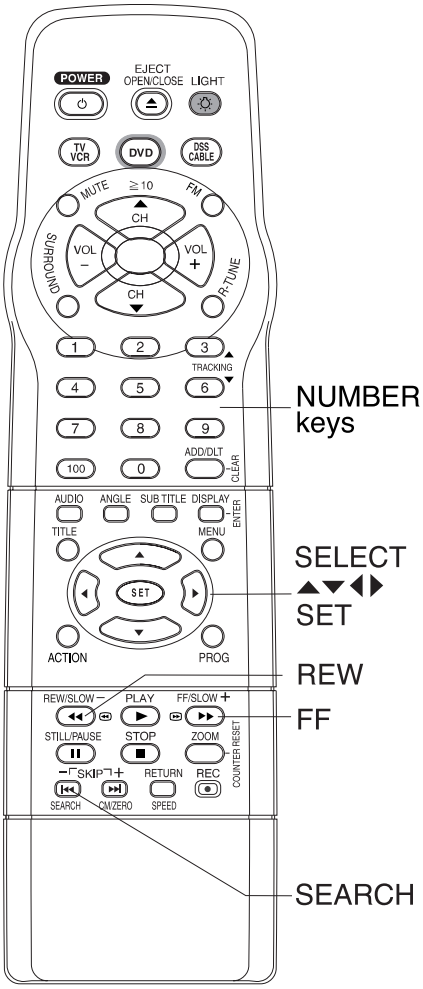


NOTE: ↓ indicates start points of each recording.

Notes

- Make each entry within 5 minutes, or the Index Search mode will be canceled.
- If Index Search is started very close to an index mark, that index mark may not be counted in the search.

*Important: If a remote control button does not work when pressed, press the TV/VCR button on the remote and try the button again.

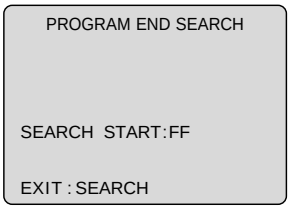


Program End Search

Locates end point of recording for continuity.

1 **Press SEARCH** twice in Playback or Stop mode to display PROGRAM END SEARCH screen .

2



Press FF to start search.

To cancel, press PLAY or **STOP.**

Example of **Program End Search** operation.

Fig.1

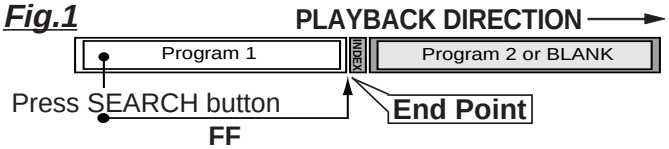


Fig.2

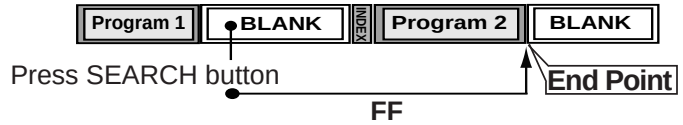
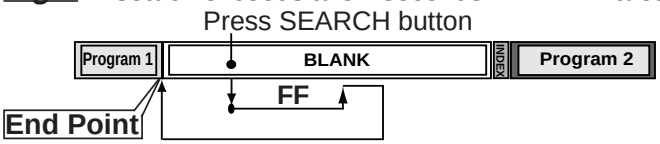
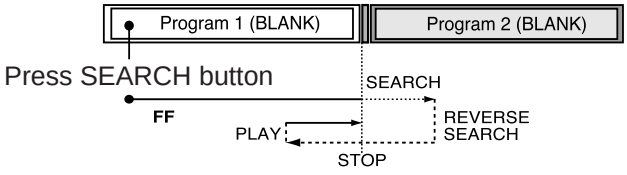


Fig.3 If search exceeds a few seconds in BLANK area.



Upon locating end point...
The unit searches slightly past end point, reverse searches, and plays the last few seconds of the program, then stops.



Note

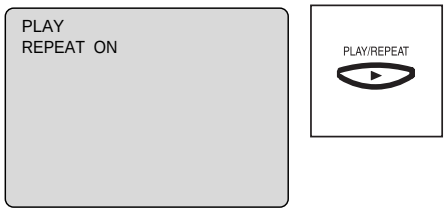
- If Program End Search is started very close to an index mark, that mark may be skipped over.

Advanced Operation

Tape Operation (continued)

Repeat Play

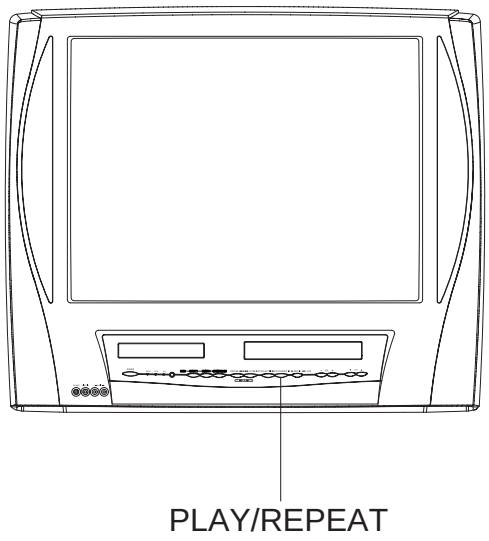
Set to see a recording over and over.



To turn “ON,”
press PLAY/REPEAT on the unit repeatedly in Play mode to select “REPEAT ON”.

To turn “OFF,”
repeat above to select “REPEAT OFF.”

- Playback repeats when tape end is reached or unrecorded portion over 30 seconds is detected.



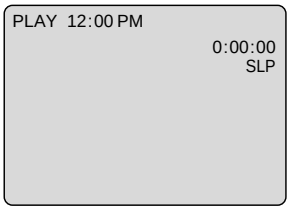
Note

- For repeat play in DVD mode, see page 55.

Zero Search

To quickly return to a specific tape counter location.

1 **Press DISPLAY*** during playback to display the Counter.

2 

Press COUNTER RESET at the desired position to reset to “0:00:00.”

3 **Continue playback, rewind, or fast forward.**

4 **Press STOP.**

5 **Press CM/ZERO** in stop mode to start ZERO SEARCH.

- Unit goes into FF or REW mode and stops at the last point the Counter was set to 0:00:00.

*Important: If a remote control button does not work when pressed, press the TV VCR button on the remote and try the button again.

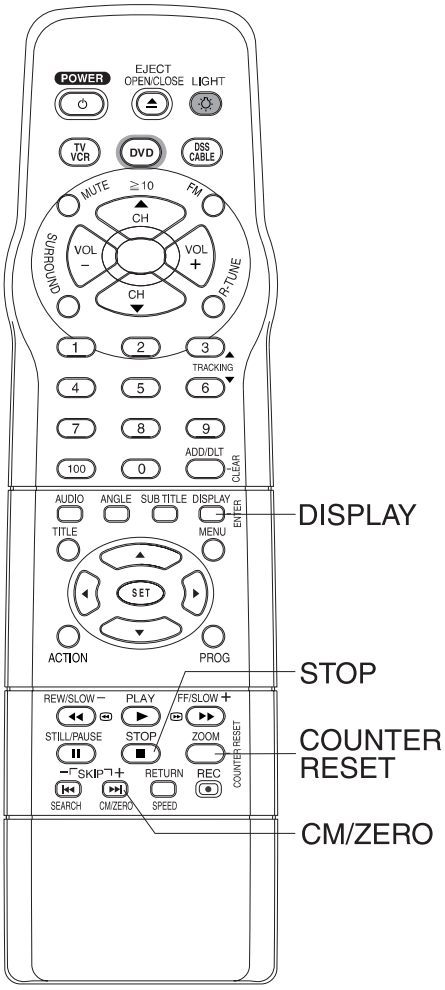
Auto Operation Functions

■ **Auto Shut Off**
No broadcast signal in TV mode (Only when Weak Signal Display is set to OFF.), DVD stops, or blank tape is played for 5 minutes
➛ Power turns off
• This feature is canceled if any button is pressed during above conditions.

■ **Auto Playback**
Insert a tape in Power off mode
➛ Power turns on
• Playback begins if tape has no record tab.

■ **Auto Rewind (except for Recording)**
Tape reaches its end
➛ Rewind, ➛ Stop

■ **Playback Auto Eject (Repeat Play is "OFF")**
Tape with no record tab reaches its end
➛ Rewind, ➛ Stop, ➛ Eject

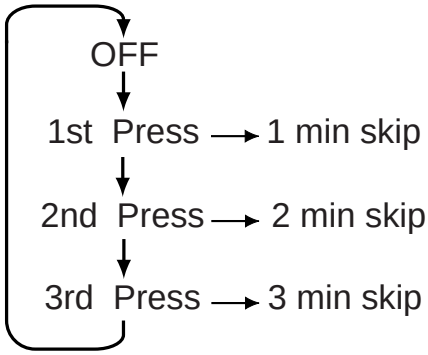


Commercial Skip

By pressing the CM/ZERO button in Playback mode you can skip over 1 to 3 minutes of recorded tape in just a few seconds.

Press CM/ZERO repeatedly to select skip time in Playback mode.

• No indication appears.

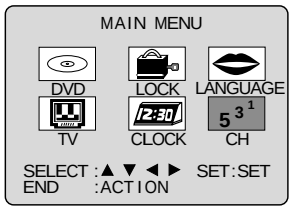


Special VCR Features

Channel Caption

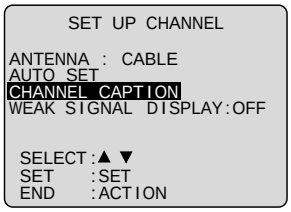
1 **Press ACTION*** to display MAIN MENU.

2



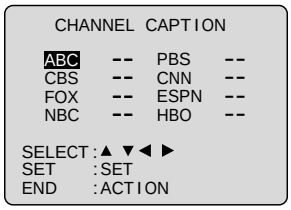
1) **Press ▲▼◄►** to select "CH."
2) **Press SET** to display SET UP CHANNEL screen.

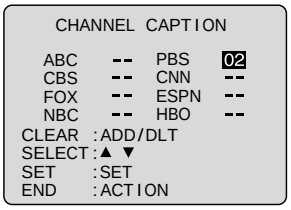
3



1) **Press ▲▼** to select CHANNEL CAPTION.
2) **Press SET** to display screen.

4





1) **Press ▲▼** to select a station.
2) **Press SET** (or ▶) to move cursor to the right.
3) **Press ▲▼** to select channel number.
4) **Press SET** (or ◀▶) to set preset captions.

• Repeat step **4** until the Caption List is complete.

To Make Corrections

Press ▲▼, then **SET** (or ▶) to select channel number.
Press ▲▼ to change, or **ADD/DLT** to delete.

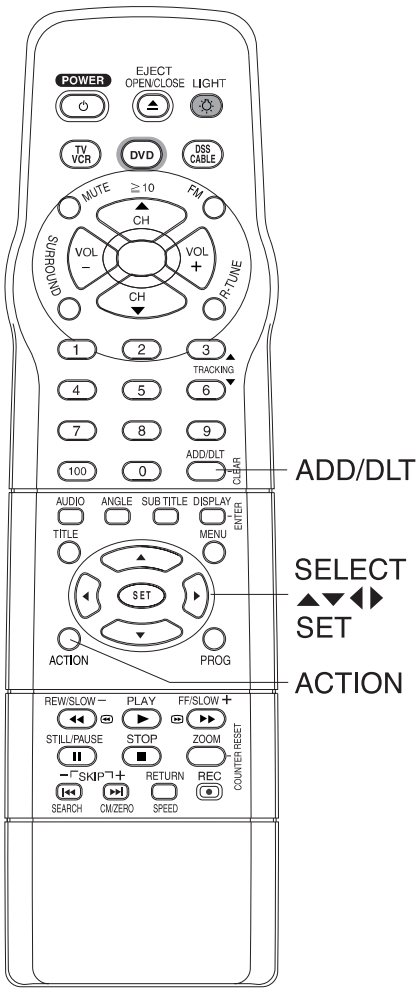
5 **Press ACTION** three times to end setup.

Channel Caption is ...

Station names, e.g. ABC, CNN, etc. are set so they will appear when a channel is selected. Choose 24 preset names.

Ready Checklist

☐ You need a list of stations and the channel numbers you receive them on.



*Important: If a remote control button does not work when pressed, press the TV/VCR button on the remote and try the button again.

Ready Checklist

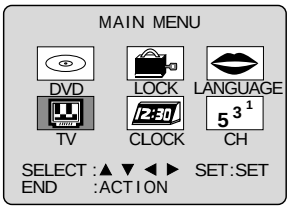
☐ It is necessary to enter TV mode by pressing TV/VCR before selecting "CH" on the MAIN MENU.

Remote Warning Feature

When Universal Remote Control (page 32) is used, and this feature is set to "ON," a warning appears whenever an invalid key is pressed in DSS or Cable mode.

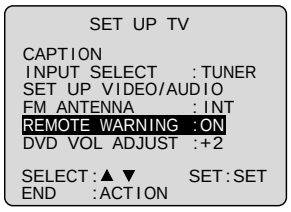
1 **Press ACTION** to display MAIN MENU.

2



1) **Press ▲▼◄►** to select "TV."
2) **Press SET** to display SET UP TV screen.

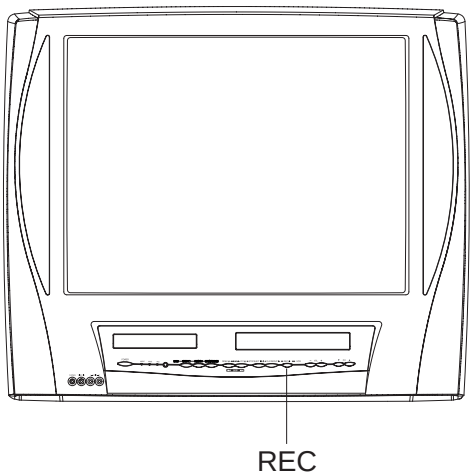
3



1) **Press ▲▼** to select REMOTE WARNING.
2) **Press SET** to set "ON" or "OFF."

- "REMOTE WARNING : OFF"
  ➔ Remote warning will not appear even if invalid key is pressed.

4 **Press ACTION** twice to return to normal screen.

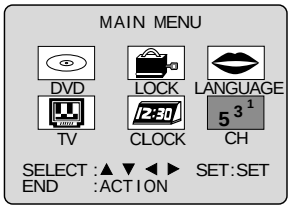


Weak Signal Display Feature

When "ON" is selected, the picture is displayed even when a broadcast signal is weak or non-existent.

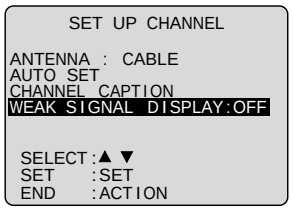
1 **Press ACTION** to display MAIN MENU.

2



1) **Press ▲▼◄►** to select "CH."
2) **Press SET** to display SET UP CHANNEL screen.

3



1) **Press ▲▼** to select WEAK SIGNAL DISPLAY.
2) **Press SET** to set "ON" or "OFF."

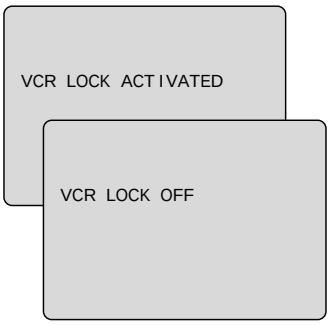
Notes

- "ON" = Picture is displayed regardless of signal condition, and may not always be clearly visible.
  "OFF"= Screen turns solid blue when signal is absent or weak.
- If unit is connected to equipment which has blue back feature, selecting "ON" will have no effect on the other equipment.

4 **Press ACTION** twice to return to the normal screen.

VCR Lock

All operations are prohibited except Timer recording and tape eject. Useful for families with small children.



In Stop mode, **hold down REC** on the unit without a cassette inserted for 7 seconds to turn "ON." (Please ignore "NO CASSETTE" warning.)

Repeat above with or without cassette to turn "OFF."

- VCR Lock is canceled automatically after about 24 hours if clock is set.

V-Chip Control Feature

V-Chip Control Feature is...

This unit has a built-in V-Chip Control which allows you to block unwanted TV usage based on US MOVIES and US TV PROGRAMS Ratings.

Process of V-Chip Control Feature

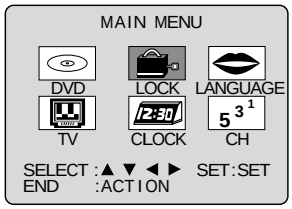
Enter Code ⇨ **Setup** ⇨ **Blocking**

Enter Secret Code

A 4-digit code must be entered to view a blocked program or change rating settings.

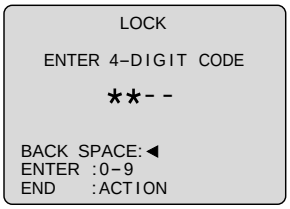
1 **Press ACTION*** to display MAIN MENU.

2



1) **Press ▲▼◄►** to select "LOCK."
2) **Press SET** to display LOCK screen.

3

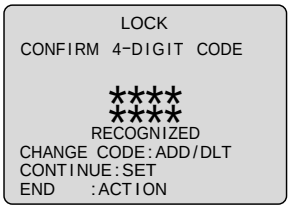


1) **Press number keys** to enter your secret code.
2) **Enter same code** again for confirmation.

- Step 2) not necessary when changing rating or secret code.
- Take care that you are not observed entering the secret code.

To Make Corrections
Press ◄ repeatedly to move the cursor.
Press number keys to make the correction.

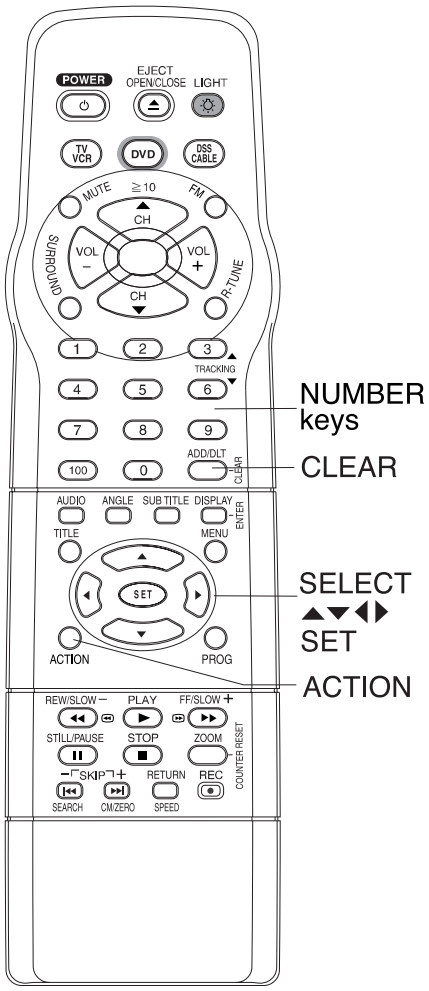
4



Press SET to display US Ratings menu (see pages 41, 42).

Or

Press ACTION twice to exit.



Changing your secret code

- You will need your current code.

Do steps **1** ~ **3**. In step **4**, **press CLEAR** to clear current code.
Repeat steps **3** and **4** to enter new code.

Notes

- Some rental movies do not include V-Chip data.
- DO NOT forget your secret code.
- Once ratings are set, restricted tapes or programs cannot be accessed unless the secret code is entered.

*Important: If a remote control button does not work when pressed, press the TV/VCR button on the remote and try the button again.

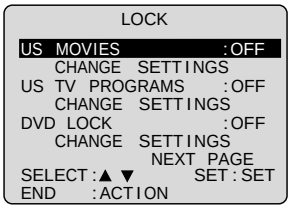
If LOCK menu is not displayed, perform "Enter Secret Code" steps on page 40.

Process of V-Chip Control Feature

Enter Code ⇨ **Setup** ⇨ **Blocking**

US MOVIES Ratings

1



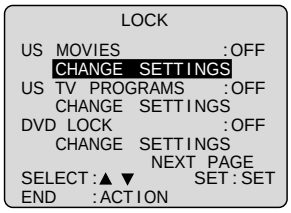
1) **Press ▲▼** to select US MOVIES.
2) **Press SET** to set "ON" or "OFF."

■ **"ON" ➛ V-Chip Control is activated.**
■ **"OFF" ➛ V-Chip Control is deactivated.**

Note

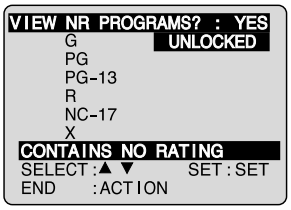
- "NEXT PAGE" displays CANADIAN V-Chip setting menu. Not necessary except when viewing Canadian tapes or broadcasts.

2



1) **Press ▲▼** to select CHANGE SETTINGS.
2) **Press SET** to display screen.

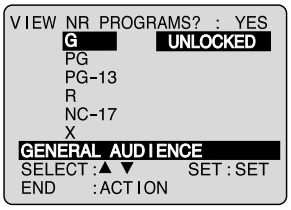
3



1) **Press ▲▼** to select VIEW NR PROGRAMS?.
2) **Press SET** to set "YES" or "NO."

NR (Not Rated) PROGRAMS
Some movies, such as old movies or foreign movies usually have no ratings.

4



1) **Press ▲▼** to select and **SET** to set ratings to be blocked. (See ratings chart on this page.)

5 **Press ACTION** to redisplay LOCK menu and continue with US TV PROGRAMS Ratings Setup (page42).
Or, **press ACTION** four times to exit.

US MOVIES RATINGS

G	**GENERAL AUDIENCE:** All ages admitted.
PG	**PARENTAL GUIDANCE:** Some material may not be suitable for children.
PG-13	**PARENTS CAUTIONED:** Some material may be inappropriate for children under 13.
R	**RESTRICTED:** Children under 17 must be accompanied by a parent or adult.
NC-17	**OVER AGE 17 ONLY:** No one 17 and under admitted.
X	**ADULTS ONLY:**

V-Chip Control Feature (continued)

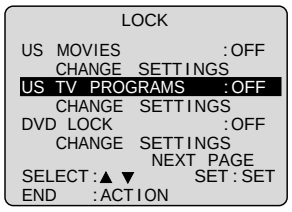
If LOCK menu is not displayed, do "Enter Secret Code" steps on page 40.

Process of V-Chip Control Feature

Enter Code ⇨ **Setup** ⇨ Blocking

US TV PROGRAMS Ratings

1



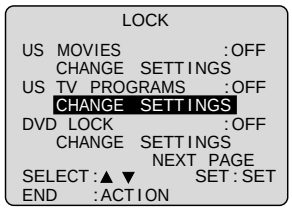
1) **Press ▲▼*** to select US TV PROGRAMS.
2) **Press SET** to set "ON" or "OFF."

■ **"ON" ➛ V-Chip Control is activated.**
■ **"OFF" ➛ V-Chip Control is deactivated.**

Note

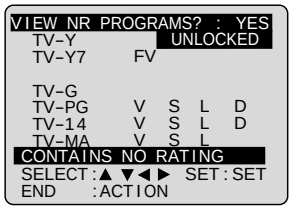
- "NEXT PAGE" displays CANADIAN V-Chip setting menu. Not necessary except when viewing Canadian tapes or broadcasts.

2



1) **Press ▲▼** to select CHANGE SETTINGS.
2) **Press SET** to display screen.

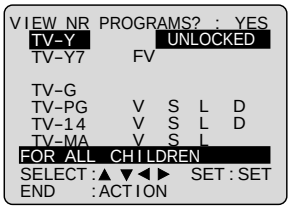
3



1) **Press ▲▼** to select VIEW NR PROGRAMS?.
2) **Press SET** to set "YES" or "NO."

NR (Not Rated) PROGRAMS
Some TV shows, such as news, sports, weather, bulletins, emergency information usually have no ratings.

4



1) **Press ▲▼** to select and **SET** to set ratings to be blocked. (See ratings charts on this page.)

Note

You may select from standard TV ratings (chart 1), or customize to a specific content rating (chart 2).

- Ratings highlighted in Green will be blocked. Ratings in white letters will not be blocked.

5 **Press ACTION** four times to exit this mode.

US TV PROGRAMS RATINGS: Chart 1

TV-Y	**FOR ALL CHILDREN:** Content specifically geared to young viewers ages 2-6.
TV-Y7	**FOR AGE 7 AND OLDER:** May contain mild physical or comedic violence which may frighten children under 7.
TV-G	**GENERAL AUDIENCE:** Contains little or no violence, strong language, or sexual dialogue or situations.
TV-PG	**PARENTAL GUIDANCE:** May contain infrequent coarse language, limited violence, some suggestive sexual dialogue and situations.
TV-14	**PARENTS CAUTIONED:** May contain sophisticated themes, sexual situations, strong language, and more intense violence.
TV-MA	**MATURE AUDIENCE:** May contain mature themes, profane language, graphic violence, and sexual situations.

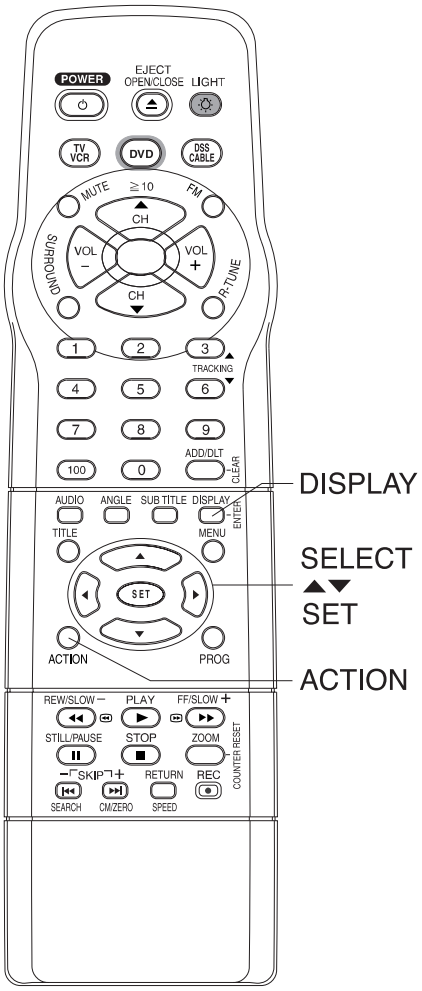
US TV PROGRAMS RATINGS: Chart 2

FV	Fantasy Violence
V	Violence
S	Sexual Situations
L	Adult Language
D	Sexually Suggestive Dialogue

*Important: If a remote control button does not work when pressed, press the TV/VCR button on the remote and try the button again.

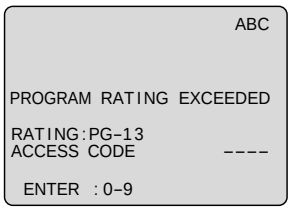
Process of V-Chip Control Feature

Enter Code ⇨ Setup ⇨ **Blocking**



Blocking Message

<When V-Chip Control is activated>



- If a program or movie exceeds the ratings you have set, a message will appear on a black background and sound is muted.

To View a Blocked Program/Movie

[Temporarily Deactivate V-Chip Control]

Enter your secret code (ACCESS CODE) in the Blocking Message screen.

- V-Chip Control is reactivated when power is turned off or power failure occurs.

[Deactivate V-Chip Control]

Enter your secret code (steps 1-4 page 40). Then, set US MOVIES and/or US TV PROGRAMS to “OFF” using ▲▼ and **SET**. (Ratings set on pages 41 and 42 is retained and will be in effect when V-Chip Control is activated again.)

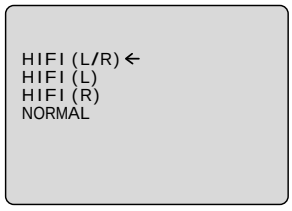
Advanced Operation

Audio Features

Audio Mode for Playback

Choose the type of sound track for playback.

1 See the "**Playback a Tape**" section on page 18 to playback the tape.

2 

Press AUDIO repeatedly (each press within 5 seconds) to select desired mode.

- Select "HIFI (L/R)", "HIFI (L)" or "HIFI (R)" to listen to stereo recordings in stereo sound. Select "NORMAL" for monaural sound.
- This screen appears when you **press AUDIO** during playback.

With the proper audio mode setting, your unit can:

- record and playback MTS stereo broadcast (main language) in stereo Hi-Fi. Stereo sound is recorded on the left and right audio tracks and on the video portion of a tape.
- record and playback a monaural broadcast (main language) or SAP (Secondary Audio Program, usually in a second language) on the Hi-Fi tracks for better quality monaural sound.
- playback non-Hi-Fi tapes in monaural.

Audio Mode for Recording

Choose audio mode to match recording type.

1 **Press AUDIO** repeatedly to select the audio mode according to the type of broadcast to be recorded.

- The Audio mode selected stays in effect until it is changed.

2 See the "**Record On a Tape**" section on page 18 to do a recording.

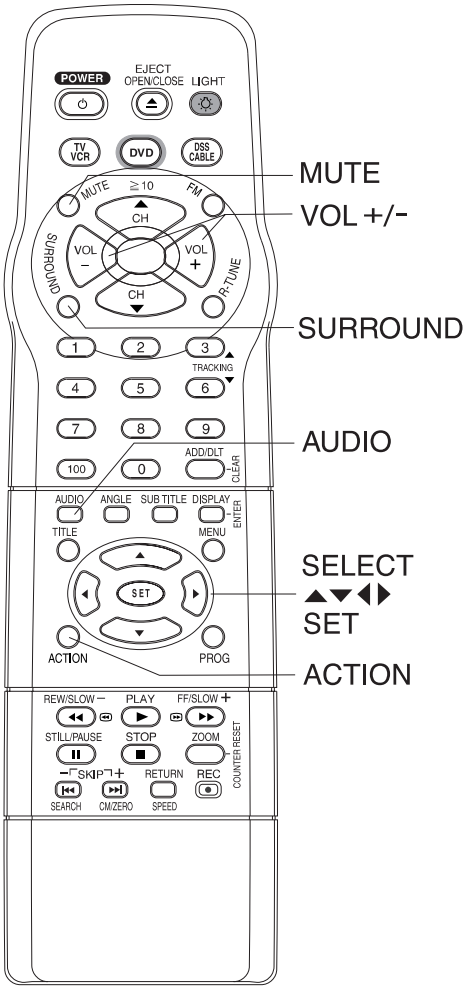
Notes

- Only tapes recorded in Hi-Fi stereo will playback with true stereo sound. Standard stereo tapes will playback with monaural sound.
- To listen to Hi-Fi stereo playback, the unit AUDIO (L/R) jacks must be connected to a stereo amp and speakers.
- There may be a difference in audio level between Hi-Fi and normal audio playback.

*Important: If a remote control button does not work when pressed, press the TV/VCR button on the remote and try the button again.

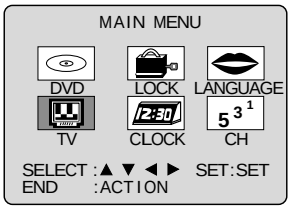
DVD Volume Adjust

Audio recorded on a DVD or Video CD often incorporates a dynamic range of sound.
This means that, when compared to a music CD, etc., the average volume is generally lower and the peaks may be higher. This unit can be set so that the volume is increased automatically.



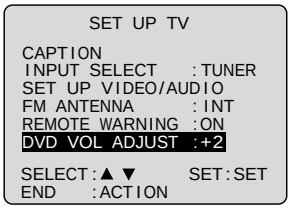
1 **Press ACTION*** to display MAIN MENU.

2



1) **Press ▲▼◀▶** to select "TV."
2) **Press SET** to display SET UP TV screen.

3



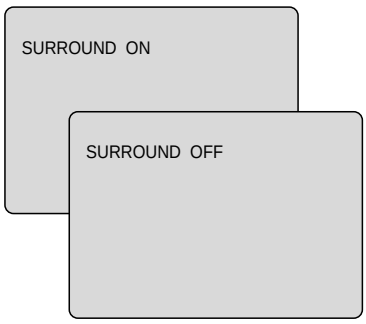
1) **Press ▲▼** to select DVD VOL ADJUST.
2) **Press SET** to set the level (0, +1, or +2).

4 **Press ACTION** twice to return to normal screen.

Surround Sound System

You can hear a deeper, 3-D sound effect using just the unit's two front speakers.

Set Surround sound.



Press SURROUND.
•"SURROUND ON" is displayed.

To Cancel, press SURROUND.

Notes

- Surround sound effect is not available for normal (mono) broadcasts.
- The surround effect (TV, VCR mode only) is not output to Audio Output L/R Connector.

Advanced Operation

Video / Audio Menu

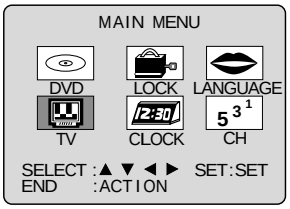
*__Important:__ If a remote control button does not work when pressed, press the TV/VCR button on the remote and try the button again.

This feature allows easy setting of picture and sound suitable for each program source.

Video Menu

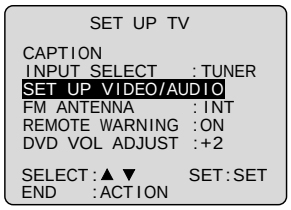
1 **Press ACTION*** to display MAIN MENU.

2



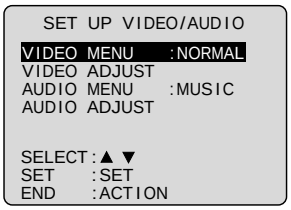
1) **Press ▲▼◄►** to select “TV.”
2) **Press SET** to display SET UP TV screen.

3



1) **Press ▲▼** to select “SET UP VIDEO/AUDIO.”
2) **Press SET** to display.

4

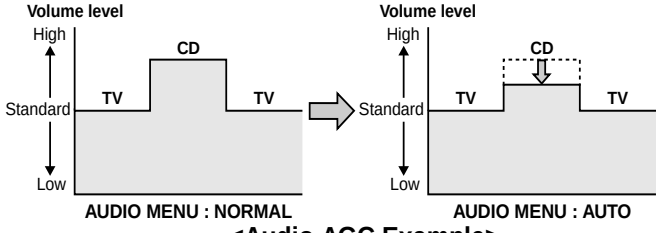


1) **Press ▲▼** to select “VIDEO MENU.”
2) **Press SET** repeatedly to select desired mode. (See below.)

5 **Press ACTION** three times to end setup.

[Video Menu]

- **NORMAL**
  Factory setting.
- **MOVIE**
  Picture is adjusted for a movie-like feel.
- **NIGHT**
  Color and picture intensity are adjusted to be easier on the eyes for night viewing.

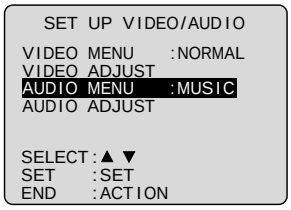


<Audio AGC Example>

Audio Menu

a **Do steps 1 - 3 left.**

b

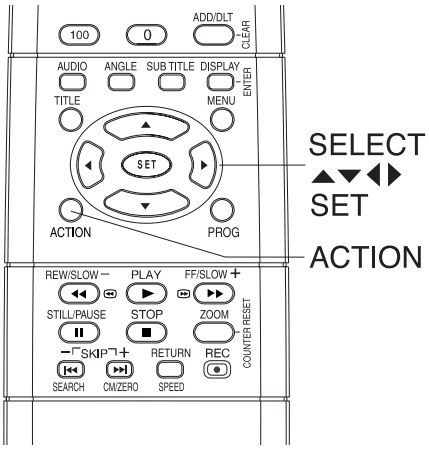


1) **Press ▲▼** to select “AUDIO MENU.”
2) **Press SET** to select desired mode. (See below.)

C **Press ACTION** three times to end setup.

[Audio Menu]

- **NORMAL**
- **AUTO**
  [Audio AGC (Auto Gain Control)**]**
  The sound level is automatically adjusted to suit the program source (see below left).
- **MOVIE**
  Sound suited to movies.
- **MUSIC**
  Sound suited to music. (Factory setting)
- **SPEECH**
  Sound suited to dialogue.



Notes

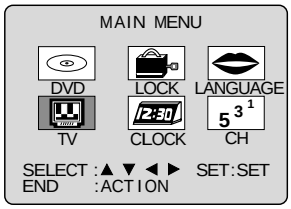
- The effects of this feature on the signal is not output to the Audio/Video Output Connector.
- When AUDIO MENU mode is “AUTO,” the AUDIO ADJUST setting will be “STANDARD.”
- AUDIO MENU settings remain in memory.
- VIDEO MENU settings do not remain in memory.

Video / Audio Adjustment

Video Adjustment

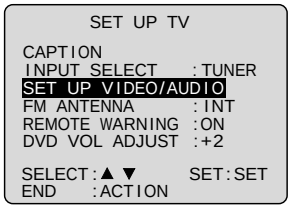
1 **Press ACTION** to display MAIN MENU.

2



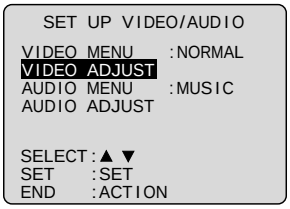
1) **Press ▲▼◄►** to select “TV.”
2) **Press SET** to display SET UP TV screen.

3



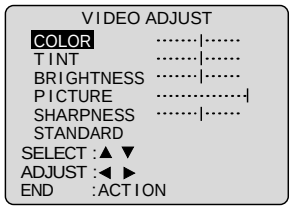
1) **Press ▲▼** to select “SET UP VIDEO/AUDIO.”
2) **Press SET** to display.

4



1) **Press ▲▼** to select “VIDEO ADJUST.”
2) **Press SET** to display.

5



1) **Press ▲▼** to select an item. (See below.)
2) **Press ◄►** to adjust.

To Reset VIDEO Controls.
Press ▲▼ and **SET** to select and set “STANDARD.” All controls return to their factory settings.

6 **Press ACTION** four times to end setup.

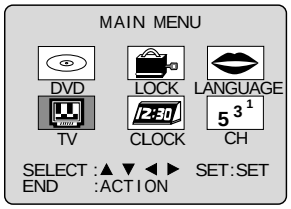
[VIDEO Adjustment]

- **COLOR Control**
  Adjust color intensity.
- **TINT Control**
  Adjust for natural flesh tones.
- **BRIGHTNESS Control**
  Adjust picture brightness.
- **PICTURE Control**
  Adjust picture intensity by adjusting both contrast and color level in the proper balance.
- **SHARPNESS Control**
  Adjust picture sharpness.

Audio Adjustment

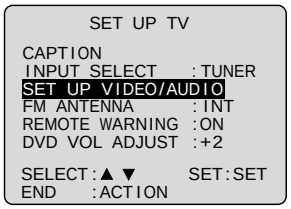
a **Press ACTION** to display MAIN MENU.

b



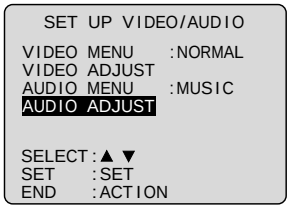
1) **Press ▲▼◄►** to select “TV.”
2) **Press SET** to display SET UP TV screen.

c



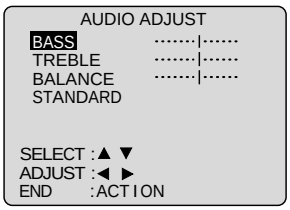
1) **Press ▲▼** to select “SET UP VIDEO/AUDIO.”
2) **Press SET** to display.

d



1) **Press ▲▼** to select “AUDIO ADJUST.”
2) **Press SET** to display.

e



1) **Press ▲▼** to select an item. (See below.)
2) **Press ◄►** to adjust.

To Reset AUDIO Controls.
Press ▲▼ and **SET** to select and set “STANDARD.” All controls return to their factory settings.

f **Press ACTION** four times to end setup.

[AUDIO Adjustment]

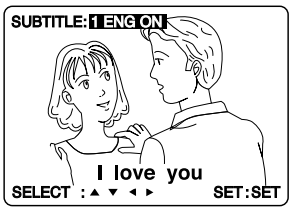
- **BASS Control**
  To adjust the intensity of low frequency sound.
- **TREBLE Control**
  To adjust the intensity of high frequency sound.
- **BALANCE Control**
  To adjust the (L/R) unit speaker output level.

• The levels set here do not affect other audio equipment when connected to the Audio Output L/R Connector.

Subtitle Language (DVD only)

You can select a different subtitle language (if offered) than the one set at the Settings for DVD Operation. (See page 58.)

1



Press SUB TITLE* in Play mode to display the subtitle selection on-screen.

- Display disappears after 5 seconds.
- When no subtitles are offered, "-" will be displayed instead of the language number.

2

1) **Press ▲▼** to select desired language.
2) **Press ►** (or ◄) to set.
3) **Press ▲** (or ▼) to select "ON" or "OFF."

Number of subtitle language being played back.

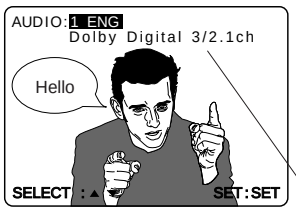
Notes

- When closed captioning is used along with subtitles, they may overlap. If so, turn one function off. (See pages 24 and 25.)
- If after several presses of the button the language does not change, language selection is not offered on the disc.
- Subtitles may not change to the selected language immediately.
- When power is turned on again or disc is removed, subtitles revert to initial setting language. If the initial language is not recorded on the disc, the disc's priority language will appear.

Audio Soundtrack Language (DVD only)

You can change the audio soundtrack language, selected at the Settings for DVD Operation, to a different language if available. (See page 58.) (This operation works only with discs on which multiple audio soundtrack languages are recorded.)

a

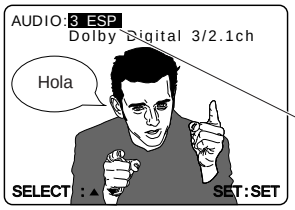


Press AUDIO in Play mode to display the audio selection on-screen.

- Display disappears after 5 seconds.

Audio attribute 1 type, sampling frequency, bit No. of the disc.

b



1) **Press ▲▼** to select desired language.

Number of the audio soundtrack language being played back.

Ready Checklist

☐ Please read "Basic DVD Operation" on page 20.

[Subtitle language (No.)] [Audio soundtrack language (No.)]

ENG	English
FRA	French
DEU	German
ITA	Italian
ESP	Spanish
NLD	Dutch
SVE	Swedish
NOR	Norwegian
DAN	Danish
POR	Portuguese
RUS	Russian
JPN	Japanese
CHI	Chinese
KOR	Korean
MAL	Malay
VIE	Vietnamese
THA	Thai
✻	Other

- Change the No. by **pressing ▲▼**, and **press SET**.

[Audio attribute 1 type, sampling frequency, bit No. of the disc (see page 59)]

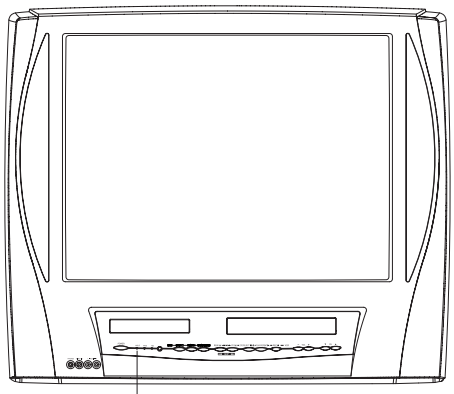
LPCM	**96KHz or 48KHz**	**16bit**	**Linear PCM disc**
		20bit	
		24bit	
Dolby Digital	**1ch - 5.1ch**		**Dolby Digital disc**
dts	**1ch - 5.1ch**		**dts disc**

Notes

- If, after several presses of the AUDIO button the language does not change, language selection is not offered on the disc.
- When power is turned on again or disc is removed, language reverts to initial setting. If this language is not recorded on the disc, the language recorded will be heard.

*Important: If a remote control button does not work when pressed, press the DVD button on the remote and try the button again.

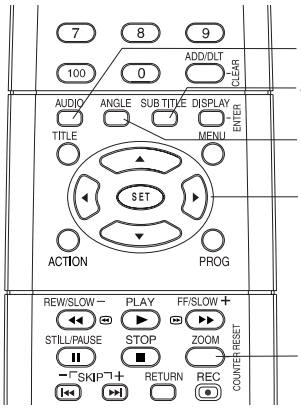
When ⃠ appears on the screen while a button is being pressed, it means that the corresponding operation is prohibited by the unit or the disc.



ANGLE Indicator

Notes

- ANGLE Indicator lights up on the unit when a scene recorded at different angles is detected.
- The angle number can be set beforehand so that the angle is switched whenever ANGLE Indicator lights up.



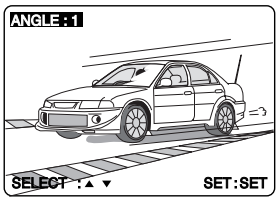
Notes

- Closed captioning will not be displayed while Picture Zoom is used. To see subtitles, set the subtitle feature to ON (see page 48).
- The subtitle cannot be enlarged nor can it's position be changed.
- The picture zoom feature does not work with a Video CD.
- During picture zoom, "ZOOM1" or "ZOOM2" is displayed on-screen.
- Zooming, on some discs, may result in poor picture quality, or may not operate at all.

Multiple Angle Viewing (DVD only)

DVDs may contain scenes shot from multiple camera angles allowing the same scene to be viewed at different angles. You can view these angles, if available, using the ANGLE button.

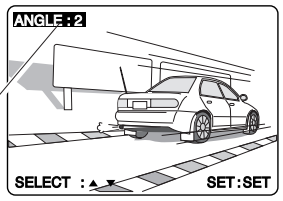
1



Press ANGLE in Play mode to display the angle selection on-screen.

- Display disappears after 5 seconds.

2



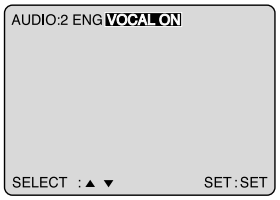
1) **Press ▲▼** to select the desired angle.

Number of angle being played back.

Vocal selection for Karaoke discs (DVD/Video CD)

a **Press AUDIO** in Play mode to display the audio screen.

b



1) **Press ▲▼** (or ◀▶) to select as shown below.
2) **Press ▶** (or ◀) to set. (DVD only)

- DVD Karaoke (1 vocal) VOCAL ON↔VOCAL OFF
- DVD Karaoke (2 vocals) VOCAL V1 + V2→VOCAL V1→VOCAL V2→VOCAL OFF
- Video CD LR→L→R

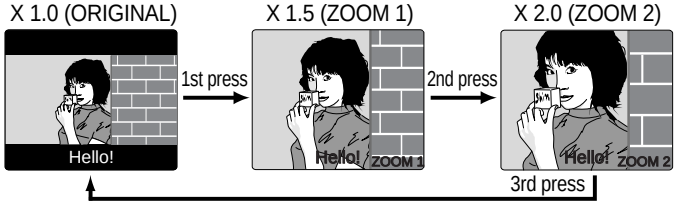
Picture Zoom (DVD only)

You can enlarge specific portions of a picture and select the zoom ratio using the ZOOM button on the remote during DVD playback.

Set Zoom size.

Press ZOOM repeatedly to change display as follows.

- You can enlarge the center portion of the image to one of 2 magnifications.



■ Use the ▲, ▼, ◀ and ▶ buttons to move the position up, down, left and right.

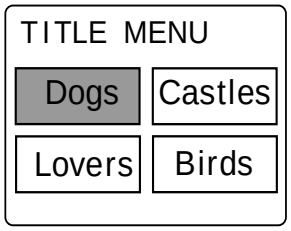
Advanced Operation

Disc Operation (continued)

Title menu (DVD only)

Some DVDs have more than one title, e.g. movies. If the disc offers a title menu, you can select the desired title number. (Operation may vary according to the disc.)

1

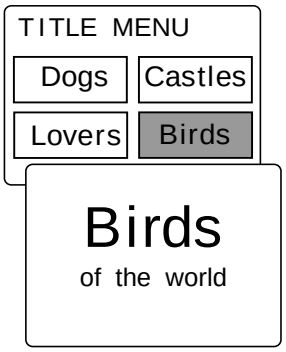


<Example>

Press TITLE* in Play mode to display title screen.

- **Pressing TITLE** again resumes play from the scene when TITLE was first pressed.

2



<Example>

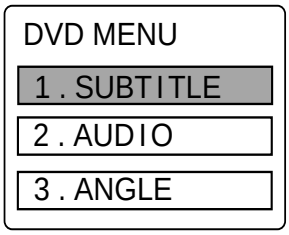
1) **Press ▲▼◀▶** or **number Key(s)** to select a title.
2) **Press SET** or **PLAY** to start play.

- Step 2) not necessary when using number key(s).

DVD menu (DVD only)

DVDs may offer a special menu. This menu may include guides to unique contents, audio/subtitle languages, etc. Although contents and operation may vary, the following steps show basic steps for using the menu.

a

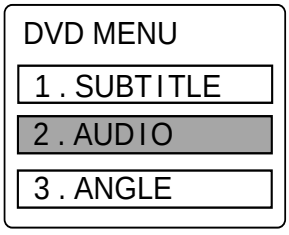


<Example>

Press MENU in Play mode to display DVD menu.

- **Pressing MENU** again resumes play from the scene when MENU was first pressed.

b

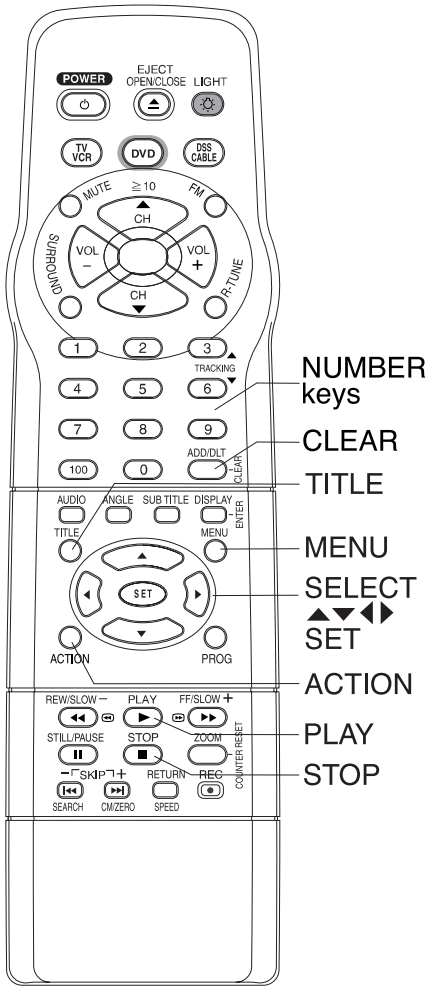


<Example>

1) **Press ▲▼◀▶** or **number key(s)** to select an item.
2) **Press SET** or **PLAY** to access.

- Step 2) not necessary when using number key(s).

Repeat step "b" if there is more than one menu.



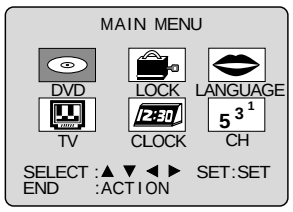
*Important: If a remote control button does not work when pressed, press the TV/VCR, DVD button on the remote and try the button again.

Program Play (Video CD/CD)

You can program specific tracks and order of play.

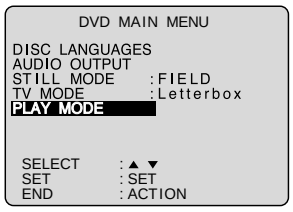
1 **Press ACTION** in Stop mode to display MAIN MENU.

2



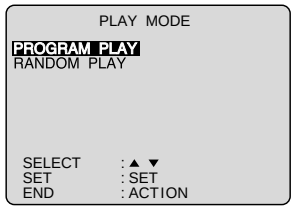
1) **Press ▲▼◀▶** to select "DVD."
2) **Press SET** to display screen.

3



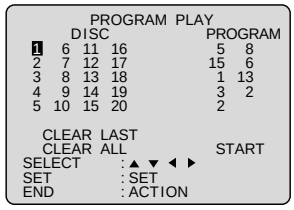
1) **Press ▲▼** to select "PLAY MODE."
2) **Press SET** to display screen.

4



1) **Press ▲▼** to select "PROGRAM PLAY."
2) **Press SET** to display screen.

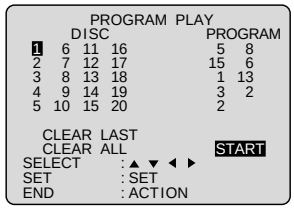
5



1) **Press ▲▼◀▶** to select a track number. (Track numbers on disc are displayed.)
2) **Press SET** to set.

- Repeat step 5 to select another track.
- The selected track is added on the right side.

6



1) **Press ▲▼◀▶** to select "START."
2) **Press SET** to start play of programs in the sequence selected.

- To cancel, **press STOP** during play, then **press CLEAR**.

Notes

- Up to 15 tracks can be programmed.
- "◀" or "▶" (depending on disc) indicates additional PROGRAM PLAY screen. **Press ▲▼◀▶** for next or previous screen.
- **To clear the last program one by one, Press ▲▼◀▶** to move to "CLEAR LAST" and **press SET**. (**Pressing CLEAR** also clears last program.)
- **To clear all programs, Press ▲▼◀▶** to move to "CLEAR ALL" and **press SET**. (Programs are also cleared when the power is turned off or the disc is removed.)

Ready Checklist

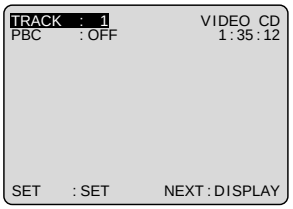
- ☐ Unit is in TV-VCR mode, press TV/VCR.
- ☐ Video CD or CD is inserted.

Program Repeat Play (Video CD/CD)

a **Do steps 1 through 6 on this page.**

b **Press DISPLAY** to display Disc Information screen.

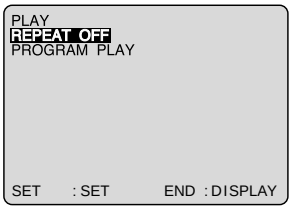
(Disc Information Screen)



c **Press DISPLAY** again to display Unit Information screen.

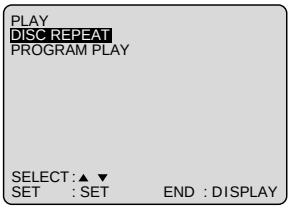
d **Press SET** to enter Select mode. ("REPEAT OFF" will flash.)

(Unit Information Screen)



e **Press ▲▼** to select "DISC REPEAT."

(Unit Information Screen)



f **Press SET** to set mode. ("DISC REPEAT" stops flashing.)
To cancel, select "REPEAT OFF" in step **e**, then **press SET**.

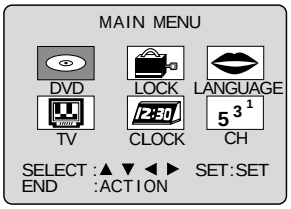
Advanced Operation

Random Play (Video CD/CD)

Tracks are played in a random order.

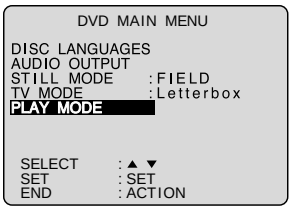
1 **Press ACTION*** in Stop mode to display MAIN MENU.

2



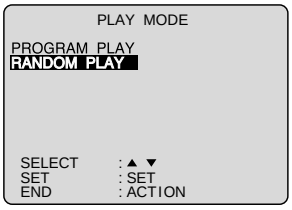
1) **Press ▲▼◀▶** to select “DVD.”
2) **Press SET** to display screen.

3



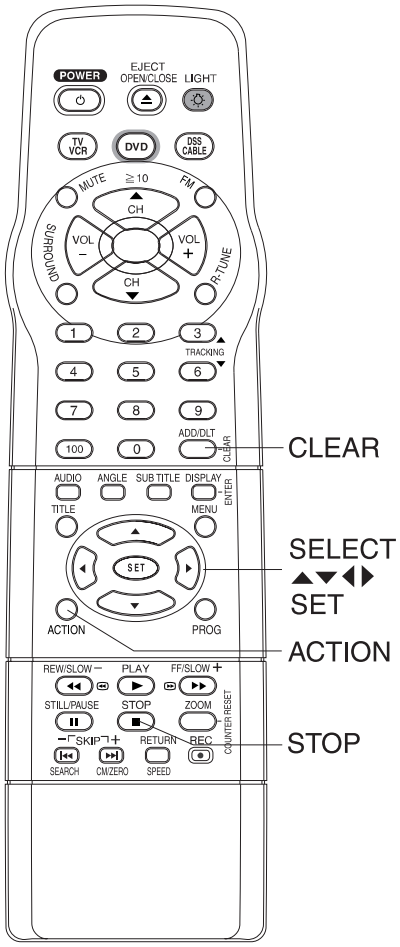
1) **Press ▲▼** to select “PLAY MODE.”
2) **Press SET** to display screen.

4



1) **Press ▲▼** to select “RANDOM PLAY.”
2) **Press SET** to begin random play.

• To cancel, **press STOP** during play, then **press CLEAR**.



DVD Operation using On-Screen Displays

When DISPLAY is pressed, On-Screen Displays show disc information (title/chapter/track number, elapsed playing time) and unit information (repeat play, Play mode).

Ready Checklist

☐ Unit is in DVD mode, press DVD.

1 **Press DISPLAY** in Play or Stop mode to display “On-Screen Display.”

- Each **press** of **DISPLAY** changes the on-screen display as follows. (Please refer to page 54 or 55.)

→ Selected disc information
↓
Selected unit information
↓
Normal Screen

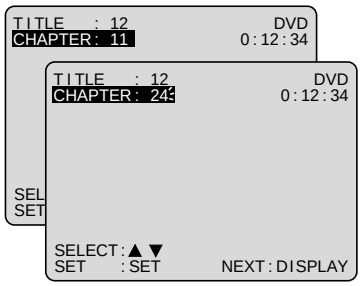
Note

- DISPLAY button does not function while DVD TITLE MENU is displayed.

2 1) **Press ▲▼** (or **◀▶**) to select an item.
2) **Press SET** to set.

3 1) **Press ▲▼** to select the setting.
2) **Press SET** to set.

<Example of DVD>



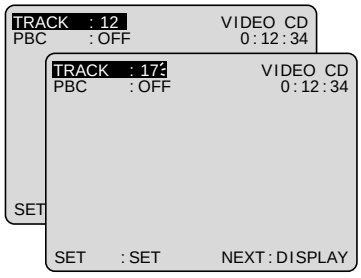
- For some functions the setting will be registered immediately without **pressing SET**.
- When numbers are displayed (e.g. title number), the NUMBER keys are also available.

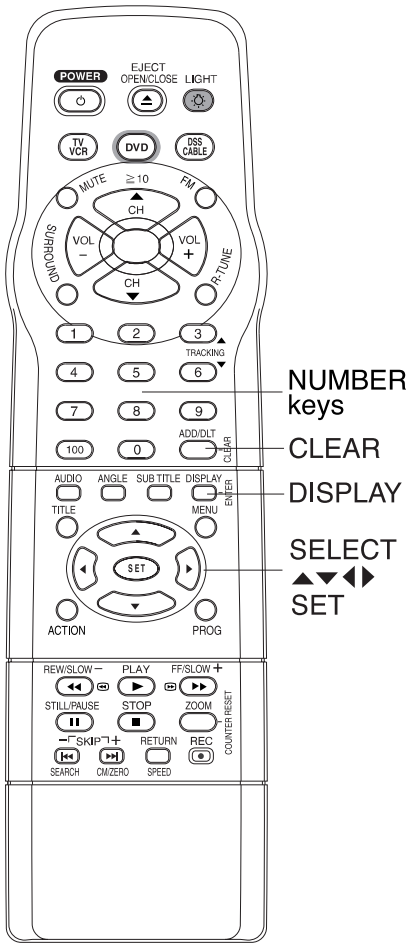
To make corrections, press ▲▼ and **SET** repeatedly to move to error, then correct.

- **Pressing ▶** is effective for elapsing time instead of the above buttons. **Press ◀** repeatedly to delete the error, then correct.

To return to the normal screen, press CLEAR or **DISPLAY** repeatedly.

<Example of Video CD>



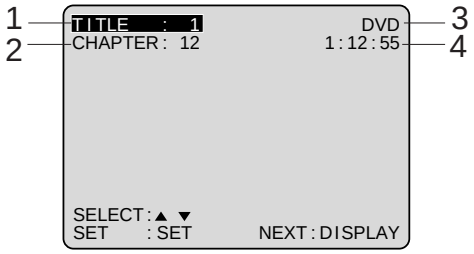


Notes

- When **DISPLAY** is pressed during playback of a Video CD with Playback control, the **NUMBER keys** are not available on the displayed screen. In this case, **press DISPLAY** again to remove the displayed screen.
- When ⃠ appears on the screen while a button is being pressed, it means that the corresponding operation is prohibited by the unit or the disc.

Detailed Descriptions of Each On-Screen Display

Disc information screen (for DVD)



1. TITLE No.

- Change the No. by **pressing ▲▼*** or the **NUMBER keys**, and **press SET**.

2. Chapter No.

- Change the No. by **pressing ▲▼** or the **NUMBER keys**, and **press SET**.

3. Disc currently being played

4. Elapsed playing time

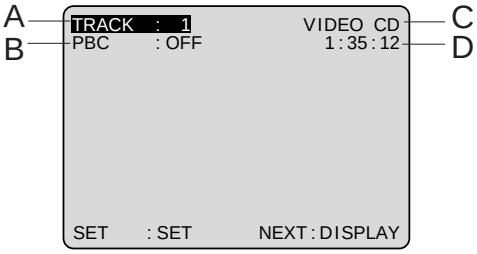
The screen may be changed by selecting the elapsed time.

- Change the elapsed time by **pressing NUMBER keys**, and **press SET**.

(e.g.) 01 : 23 : 45 0 ➛ 1 ➛ 2 ➛ 3 ➛ 4 ➛ 5

- This function does not work with some discs.

Disc information screen (for Video CD/ CD)



A. Track No.

- Change the No. by **pressing ▲▼** or the **NUMBER keys**, and **press SET**.

B. Playback control ON/OFF

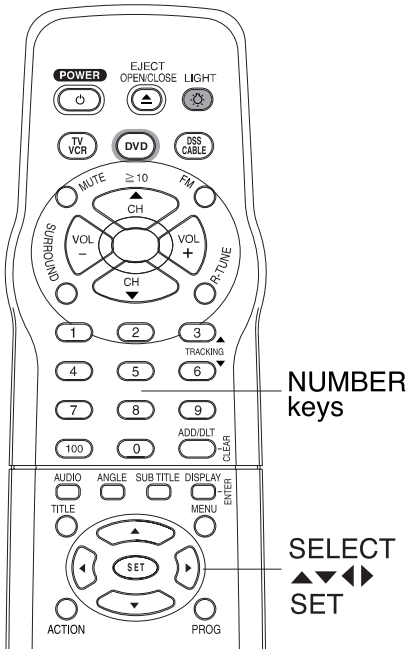
[Video CD with playback control only]

ON	Video CD menu play is displayed.
OFF	Video CD menu play is cleared.

C. Disc currently being played

Video CD	CD

D. Elapsed playing time



Notes

- Track No. and elapsed playing time are not displayed during play started from menu of Video CDs with playback control.
- When ⃠ appears on the screen while a button is being pressed, it means that the corresponding operation is prohibited by the unit or the disc.

*Important: If a remote control button does not work when pressed, press the DVD button on the remote and try the button again.

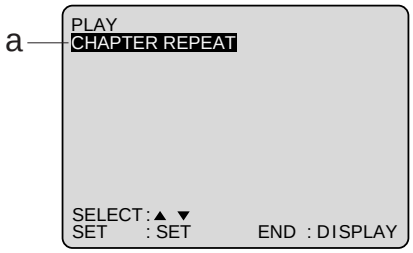
Detailed Descriptions of Each On-Screen Display

Unit information screen

- Change the desired mode during play by **pressing ▲▼**, and **press SET**.

a. Repeat Play

DVD	CHAPTER REPEAT	TITLE REPEAT	REPEAT OFF
Video CD/CD	TRACK REPEAT	DISC REPEAT	REPEAT OFF

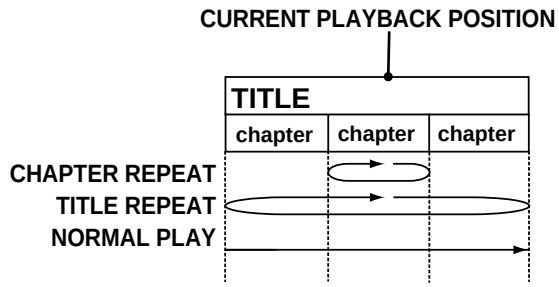


b. Play mode [Video CD/ CD only] (See page 51 or 52.)

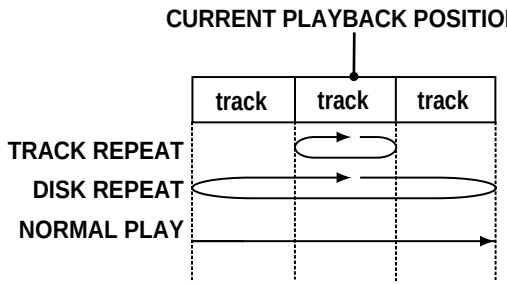
PROGRAM PLAY	program play
RANDOM PLAY	random play
-----	normal play

For your reference

• **CHAPTER/TITLE REPEAT PLAY (DVD)**



• **TRACK/DISC REPEAT PLAY (Video CD/CD)**



Note

• For repeat play in VCR mode, see page 36.

MP3 Playback Operation

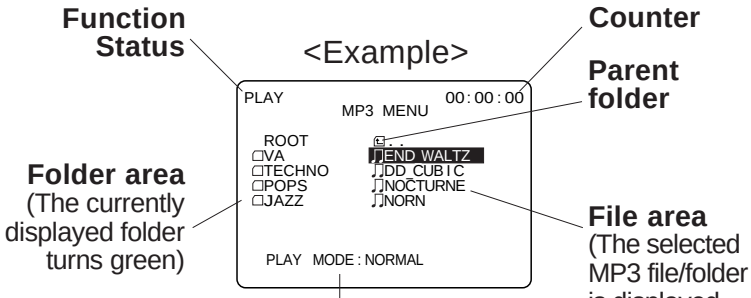
MP3 Playback

You can use this unit to play MP3 format audio recorded for personal use with a computer etc. onto a CD-R or CD-RW. Play may not be possible in some cases due to the condition of the recording.

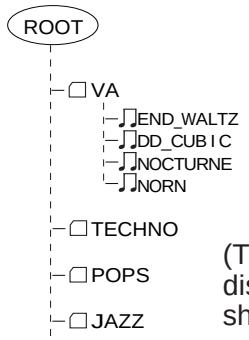
1 **Press POWER*** on the remote or unit.

2 **Press OPEN/CLOSE,**
and then place a MP3 disc into the disc tray.
Press OPEN/CLOSE to close.

3 MP3 MENU is displayed and playback is started automatically. (The MP3 CD directory is displayed.)



<Example>



♫ : **MP3 file**
▢ : **Folder**
▢ : **Parent folder**

(The MP3 CD directory structure displayed in the above example OSD is shown in the diagram at left.)

■ **Forward/Reverse Search**
Press FF/SLOW+ or **REW/SLOW-** during play.
Press PLAY to release.
- Search speed, slow at first, increases with each additional press of the button up to 4 levels.

■ **Forward/Reverse Track Skip**
Press SKIP ▶▶| or **|◀◀ SKIP** during play.
Each press skips a track.
- If pressed within first 3 seconds of playback, skips to the previous track. If over 3 seconds, returns to first track. (**|◀◀ SKIP** only.)
- Only the **SKIP ▶▶|** or **|◀◀ SKIP** button can be used for track skip selection during playback.
Put unit in Stop mode before performing folder/file selection (see above right.)

4 **Press STOP** to stop playing.

5 **Press OPEN/CLOSE** to eject the disc.
The MP3 MENU is closed automatically.

■ **MP3 playback** (During STOP mode)
1) **Press ▲▼** to select an MP3 file (♫).
2) **Press SET** or **PLAY** to start playback.

■ **Select folder** (During STOP mode)
1) **Press ▲▼** to select a folder (▢).
2) **Press SET** to display files/folders contained in the folder.

■ **Select parent folder** (During STOP mode)
1) **Press ▲▼** to select a folder (▢).
2) **Press SET** to make changes to the previous directory display.

Note
- Folder area operation cannot be done. Only file area operation is possible.

■ **Select PLAY MODE** (During STOP mode)
1) **Press ◀▶** to move cursor to PLAY MODE.
2) **Press ▲▼** to select the desired PLAY MODE (see below).

[PLAY MODE]

NORMAL:
All MP3 files are selected and played back one time only.

SINGLE REPEAT:
The selected MP3 file is played back repeatedly.

FOLDER REPEAT:
The MP3 files contained in the selected folder are played back repeatedly.
However, folders below the selected folder are not played back.

DISC REPEAT:
All MP3 files are played back repeatedly.

DVD Lock Feature

*Important: If a remote control button does not work when pressed, press the TV/VCR, DVD button on the remote and try the button again.

You can prevent playback of DVDs with a specific rating level which may be unsuitable for children.

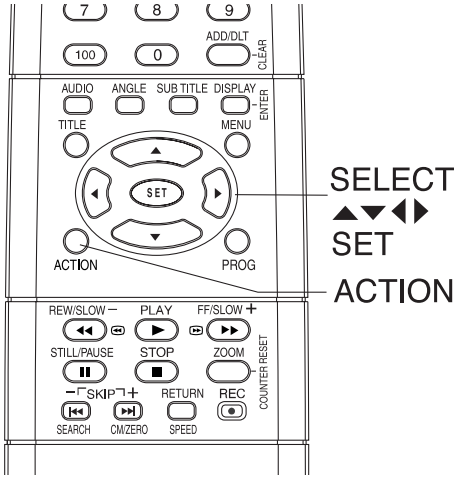
- Some DVDs are encoded with a rating level. If the disc rating is higher (stricter) than the one you preset, playback will be prohibited.

Caution

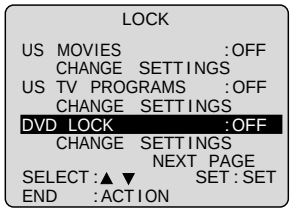
Discs not encoded with a rating level will play even if the jacket states it is for mature audiences. For these discs, the DVD Lock Ratings will not work.

DVD Lock Ratings (DVD only)

Perform DVD Lock setting in TV mode.
Enter your secret code to display LOCK menu.
(Perform "Enter Secret Code" steps on page 40.)



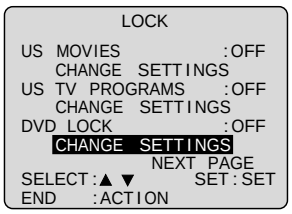
1



1) **Press ▲▼** to select "DVD LOCK."
2) **Press SET** to set "ON" or "OFF."

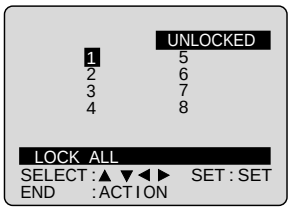
■ **"ON" ➔ DVD Lock is activated.**
■ **"OFF" ➔ DVD Lock is deactivated.**

2



1) **Press ▲▼** to select "CHANGE SETTINGS."
2) **Press SET** to display screen.

3



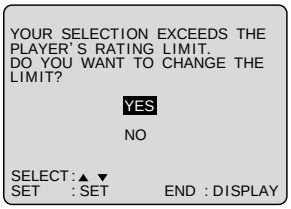
1) **Press ▲▼◀ ▶** to select rating level.
2) **Press SET** to select "LOCKED" or "UNLOCKED."

LEVEL 1 : LOCK ALL:
Playback of all DVDs, CDs and Video CDs is prohibited. (Use to prohibit play of mature theme DVDs not encoded with a rating level.)
LEVEL 2 : DVDs expressly for children can be played back.
LEVEL 3 to 7 :
DVDs for general audiences/children can be played back. (DVDs with mature content are prohibited.)
LEVEL 8 : NO LIMIT: (Factory preset)
All DVDs can be played back.

- Ratings which are highlighted in Green will be blocked; those not highlighted (white letters) will not be blocked.

4 **Press ACTION** three times to end setup.

<When DVD Lock is activated>



After DVD Lock is set and a blocked DVD is played, this message will appear. The message may differ depending on the disc.

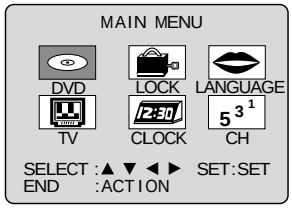
To continue viewing a blocked program for now,
Press ▲▼ to select "YES" and **SET**. Then, enter your 4-digit secret code. When "NO" is selected, blocked programs cannot be viewed.

To change DVD LOCK settings
After entering your secret code in step 3 on page 40, select "OFF" to deactivate DVD Lock or change the rating level.

Settings for DVD Operation

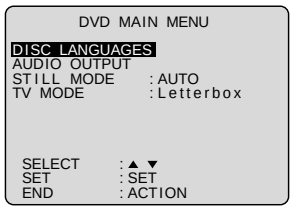
1 **Press ACTION*** in Stop mode to display MAIN MENU.

2



1) **Press ▲▼◀▶** to select "DVD."
2) **Press SET** to display screen.

3



1) **Press ▲▼** to select an item.
2) **Press SET** to set.

DISC LANGUAGES (See below.)
Any languages offered on the disc can be set. If a language not offered is set, the original disc language will be selected.

AUDIO OUTPUT (See page 59.)
You can set the audio output that comes from the digital audio output terminal.

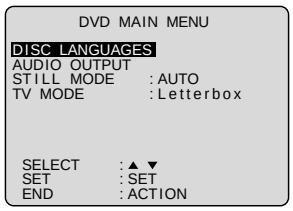
STILL MODE (See page 60.)
To select "FIELD" or "FRAME" to prevent jitter or to make small text or fine patterns clearly visible in a still picture. When "AUTO" is set, "FIELD" or "FRAME" is selected automatically.

TV MODE (See page 60.)
To select whether the video material for a wide-screen will be played back in Pan & Scan style or in Letterbox style.

DISC LANGUAGES (DVD only)

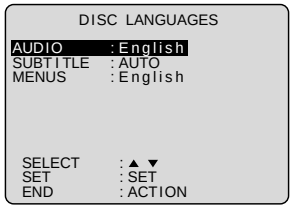
To select and set the language of the audio soundtrack, subtitles, or title/DVD menus for all discs to be played.

4



1) **Press ▲▼** to select "DISC LANGUAGES."
2) **Press SET** to display screen.

5



1) **Press ▲▼** to select an item.
2) **Press SET** repeatedly for desired language. (Please refer right.)

6 **Press ACTION** to redisplay DVD menu and go to step 3 to setup another item. Or, **press ACTION** three times to exit.

Once initial settings are done, they remain in memory (even after the power is off) until changed. This means the unit will always operate under the same conditions (especially DVDs) each time.

Ready Checklist

☐ Unit is in TV-VCR mode, press TV/VCR.

"AUDIO" selections

To select the audio soundtrack language. (factory preset: English)
English/Spanish/French/Japanese
Original: Original disc language
OTHER ✱✱✱✱: Other language selection*1

"SUBTITLE" selections

To select the subtitle language. (Factory preset: AUTO)
AUTO: Same language selected for "AUDIO"
- If language set for "AUDIO" is used in playback, subtitles will not appear.
- If another language is used during playback, the subtitles will appear in the language selected at "AUDIO" setup.

English/Spanish/French/Japanese
OTHER ✱✱✱✱: Other language selection*1

"MENUS" selections

(factory preset: English)
To select the language used in title menus or DVD menus.
English/Spanish/French/Japanese
OTHER ✱✱✱✱: Other language selection*1

To enter OTHER ✱✱✱✱ code number, Press number keys (Please refer to language codes on page 61).
To make corrections, **press ◀** repeatedly to delete language code number, and correct.

*1 If the selected language is not offered, the original disc language is selected.

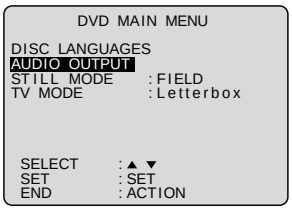
*Important: If a remote control button does not work when pressed, press the TV VCR, DVD button on the remote and try the button again.

AUDIO OUTPUT

Select the digital output to be output from the optical digital audio output connector of the unit.

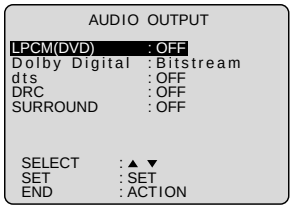
1 **Do steps 1 and 2 on page 58.**

2



1) **Press ▲▼** to select "AUDIO OUTPUT."
2) **Press SET** to display screen.

3



1) **Press ▲▼** to select an item.
2) **Press SET** repeatedly for output. (See below.)

■ "LPCM (DVD)" selections

OFF: Linear PCM of less than 48 kHz/16 bit is output. When playing DVDs recorded in linear PCM of over 48 kHz/20 bit or 96 kHz, no digital audio is output. (Factory preset)

PCM: When playing DVDs recorded in linear PCM of 48 kHz/20 bit/24 bit or 96 kHz, digital audio converted to 48 kHz/16 bit is output. (Digital output of PCM audio is restricted to 48 kHz/16 bit or below for copyright protection.)

■ "Dolby Digital" selections

Bitstream: Dolby Digital bitstream (1ch-5.1ch) is output. (Factory preset)

OFF: No output.

■ "dts" selections

Bitstream: dts bitstream is output. (Factory preset)

OFF: No output.

■ "DRC (Dynamic Range Compression)" selections

OFF: Normal audio range is selected. (Factory preset)

ON: For dynamic sound even at low volume, this is useful for late-night listening. [Dolby Digital DVDs only].

■ "SURROUND" selections

Surround Sound creates the effect of sound coming from non-existent rear speakers even when only connected to a 2-channel stereo system.

OFF: No Surround Sound effect. (Factory preset)

ON: Surround Sound effect.

4 **Press ACTION** to redisplay DVD menu and go to step 2 to setup another item. Or, **press ACTION** three times to exit.

Type of amplifier to be connected	Recommended setting		
	LPCM (DVD)	Dolby Digital	dts
No amplifier is connected	OFF	OFF	OFF
AV amplifier (with digital audio input connector) without Dolby Digital/dts decoder	PCM*1	OFF*2	OFF*2
AV amplifier including Dolby Digital decoder	PCM*1	Bitstream	OFF
AV amplifier including Dolby Digital/dts decoder	PCM*1	Bitstream	Bitstream*3

- Make settings according to amplifier connected to optical audio output as shown in above table.
- When a dts decoder is not connected, to enjoy dts DVD, please select audio output other than dts on the dts DVD menu screen. Otherwise, there will be no sound from the unit speakers.

*1 Audio output from unit is converted to 48 kHz/16 bit in addition to audio from digital audio output.
To enjoy high quality sound at 48 kHz/20 bit / 24 bit or 96 kHz, connect the amplifier or decoder directly to the audio output connectors, not to the digital audio output connector. [Select "OFF" at the "LPCM (DVD)".]

*2 When connecting an amplifier (with an optical digital input connector) which does not contain the Dolby Digital or dts decoder, be sure to select "OFF".
If "Bitstream" is selected, starting DVD play may cause such a high level of noise as to be harmful to your ears and damage the speakers.

*3 When a dts decoder is connected, please select "Bitstream" in "dts". If "OFF" is selected, there will be no sound.

Notes

- Turn off other surround effects when using this surround effect.
- For optimum effect, the distance between the unit and the listener should be about 3 or 4 times the distance between the right and left front speakers.

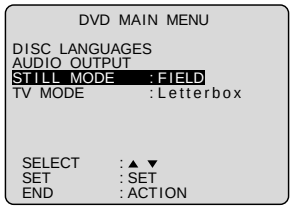
Settings for DVD Operation (continued)

STILL MODE

Set to reduce jitter in a displayed still picture or a motion picture.

1 **Do steps 1 and 2 on page 58.**

2



1) **Press ▲▼*** to select "STILL MODE."
2) **Press SET** repeatedly for mode. (See below)

AUTO: "FIELD" (Field still) or "FRAME" (Frame still) is automatically selected during the still mode. (Factory preset)

FIELD: "FIELD" (Field still) is always selected. This setting will reduce jitter when compared with "AUTO" on some discs.

FRAME: "FRAME" (Frame still) is always selected. Some texts and fine patterns will be seen clearly when compared with "AUTO" on some discs.

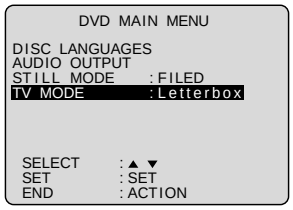
3 **Press ACTION** twice to exit this mode.

Selecting TV MODE

Set the screen display style for widescreen video material playback.

a **Do steps 1 and 2 on page 58.**

b



1) **Press ▲▼** to select "TV MODE."
2) **Press SET** repeatedly for mode. (See below.)

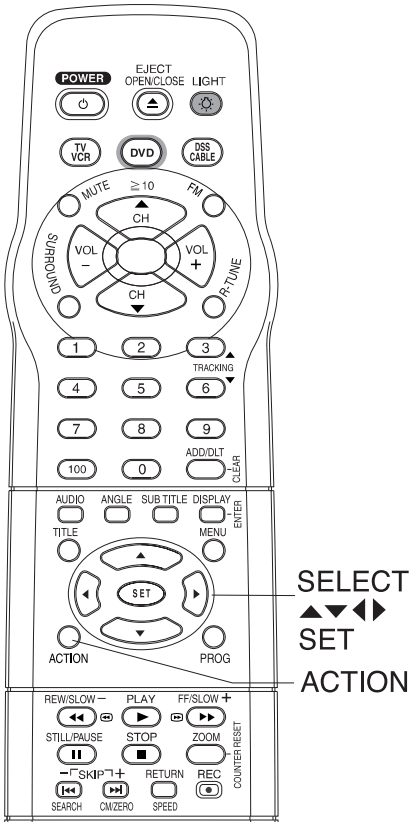
Pan & Scan : (Factory preset) Widescreen video data is played in Pan & Scan style (left and right of screen is trimmed.)
- Video data not formatted in Pan & Scan will play in letterbox style.

Letterbox : Widescreen video data is played in Letterbox style (top and bottom of screen has black margin).

C **Press ACTION** twice to exit this mode.

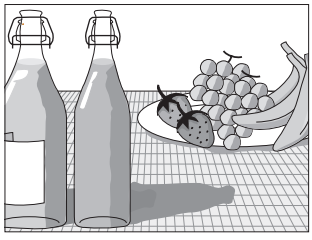
*Important:

If a remote control button does not work when pressed, press the DVD button on the remote and try the button again.

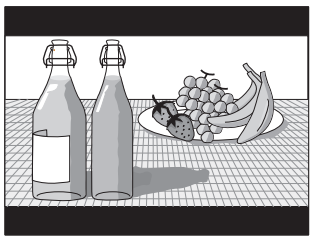


Example

- Pan & Scan (Factory preset)



- Letterbox



Language Code List

Enter the appropriate code number for the initial settings “AUDIO”, “SUBTITLE” and/or “MENUS” (see page 58).

Code	Language
6565	Afar
6566	Abkhazian
6570	Afrikaans
6577	Ameharic
6582	Arabic
6583	Assamese
6588	Aymara
6590	Azerbaijani
6665	Bashkir
6669	Byelorussian
6671	Bulgarian
6672	Bihari
6678	Bengali;Bangla
6679	Tibetan
6682	Breton
6765	Catalan
6779	Corsican
6783	Czech
6789	Welsh
6865	Danish
6869	German
6890	Bhutani
6976	Greek
6978	English
6979	Esperanto
6983	Spanish
6984	Estonian
6985	Basque
7065	Persian
7073	Finnish
7074	Fiji

Code	Language
7079	Faroese
7082	French
7089	Frisian
7165	Irish
7168	Scots Gaelic
7176	Galician
7178	Guarani
7185	Gujarati
7265	Hausa
7273	Hindi
7282	Croatian
7285	Hungarian
7289	Armenian
7365	Interlingua
7378	Indonesian
7383	Icelandic
7384	Italian
7387	Hebrew
7465	Japanese
7473	Yiddish
7487	Javanese
7565	Georgian
7575	Kazakh
7576	Greenlandic
7577	Cambodian
7578	Kannada
7579	Korean
7583	Kashmiri
7585	Kurdish
7589	Kirghiz
7665	Latin

Code	Language
7678	Lingala
7679	Laothian
7684	Lithuanian
7686	Latvian, Lettish
7771	Malagasy
7773	Maori
7775	Macedonian
7776	Malayalam
7778	Mongolian
7779	Moldavian
7782	Marathi
7783	Malay
7784	Maltese
7789	Burmese
7865	Nauru
7869	Nepali
7876	Dutch
7879	Norwegian
7982	Oriya
8065	Panjabi
8076	Polish
8083	Pashto, Pushto
8084	Portuguese
8185	Quechua
8277	Rhaeto-Romance
8279	Romanian
8285	Russian
8365	Sanskrit
8368	Sindhi
8372	Serbo-Croatian
8373	Singhalese

Code	Language
8375	Slovak
8376	Slovenian
8377	Samoan
8378	Shona
8379	Somali
8381	Albanian
8382	Serbian
8385	Sundanese
8386	Swedish
8387	Swahili
8465	Tamil
8469	Telugu
8471	Tajik
8472	Thai
8473	Tigrinya
8475	Turkmen
8476	Tagalog
8479	Tonga
8482	Turkish
8484	Tatar
8487	Twi
8575	Ukrainian
8582	Urdu
8590	Uzbek
8673	Vietnamese
8679	Volapük
8779	Wolof
8872	Xhosa
8979	Yoruba
9072	Chinese
9085	Zulu

Before Requesting Service

Check the following points once again if you are having trouble with your unit.

Power	Correction
No power…	• Completely insert Power Plug into an AC outlet. • Set POWER button to ON.
Power turns itself off...	• Auto power-off (shut off) occurs after about 5 min. in DVD mode with no operation, or if there is no broadcast signal in TV or Playback mode. Turn the power back on. (P. 21, 37)
Monitor	**Correction**
No picture or sound...	• Make sure your antenna system (TV or CABLE), is correctly set. (P. 11) • Completely insert Power Plug into an AC outlet. • Set POWER button to ON.
Poor picture with normal sound...	• Adjust BRIGHTNESS, SHARPNESS, and PICTURE controls in the SET UP Video Adjustment. (P. 47)
Poor sound with normal picture...	• Adjust VOLUME control. (P. 22)
Poor TV reception...	• Adjust SHARPNESS and PICTURE controls in the SET UP Video Adjustment. (P. 47)
No color or poor color...	• Adjust TINT and COLOR controls in the SET UP Video Adjustment. (P. 47)
Ghost (multiple) images...	• Install a directional antenna.
TV programs cannot be watched...	• Make sure the selected channel is in unit's memory. (P. 16)
Channel cannot be selected...	• Only the channel begin recorded can be viewed on this unit.
VCR	**Correction**
TV program cannot be recorded...	• Make sure your antenna system (TV or CABLE), is correctly set. (P. 11) • Make sure cassette record tab is intact. (P. 4)
Timer recording cannot be performed…	• Check that clock is set to current time and date. • Make sure DSS/CABLE box (if used) is left on and tuned to channel to be recorded. • Set recording Start/Stop times correctly. (P. 30, 31) • Timer recording may not be performed or continued if a power interruption of more than 1 minute occurs before or during a Timer Recording, even after power is restored.
No playback picture, or the playback picture is noisy or contains streaks...	• Adjust TRACKING control in either direction. (P. 6) • Try Head Cleaning. (P. 6)
VCR cannot be controlled...	• Make sure VCR LOCK is set to off. (P. 39)
Remote Control	**Correction**
Unit cannot be controlled...	• Aim Remote directly at the remote sensor on the unit. (P. 10) • Avoid any object blocking signal path. • Inspect the remote batteries. (P. 4) • Make sure VCR LOCK is set to off. (P. 39) • Exposing unit remote sensor to direct fluorescent or outdoor light may cause signal interference.
ACTION, PLAY, SELECT, SET POWER, etc. buttons cannot be selected...	• Press TV/VCR for TV-VCR mode. (P. 32) • Press DVD for DVD mode. (P. 32) • Press FM for FM mode. (P. 32) • Check remote batteries.

DVD/Video CD/CD	Correction
Play fails to start even when PLAY is pressed...	• This unit cannot play discs other than DVDs, Video CDs and CDs. • The disc may be dirty and require cleaning.
Play starts but then stops immediately...	• Be sure disc is installed with label side up.
Picture is distorted during rapid advance or rapid reverse...	• The picture will be somewhat distorted at times: this is normal.
No Forward/Reverse search play...	• Some discs may have sections which prohibit Forward/ Reverse search. (P. 21)
Play does not start even when title is selected...	• Confirm the “DVD LOCK” setting. (P. 57)
Audio soundtrack and/or subtitle language is not the one selected at the initial settings...	• If the audio soundtrack and/or subtitle language selected at DVD initial settings does not exist on the disc, it will not be accessible.
No subtitles...	• Subtitles appear only when available on disc. • Select “ON” at the “Subtitle language” section (P. 48) to display subtitles.
Alternative audio soundtrack (or subtitle) language cannot be selected...	• Alternative language cannot be selected with discs which do not contain more than one language. • For some discs, alternative language cannot be selected with the AUDIO or SUB TITLE button. Try selecting it from the DVD menu if available.
Angle cannot be changed...	• This function is dependent on software availability. Even if disc has multiple angles, they may be recorded for specific scenes only (ANGLE Indicator on unit lights up). (P. 49)

Miscellaneous	Correction
Video cassette cannot be inserted...	• Insert the cassette window side up; record tab facing you.
Video cassette cannot be removed...	• Completely insert Power Plug into an AC outlet.
Eject does not function or insertion cannot be done...	• Turn the POWER off and then on, and try ejecting or inserting the tape again.
Video cassette ejects when a recording is started, or the power is turned off for timer recording...	• Make sure cassette record tab is intact. (P. 4)
The disc cannot be removed...	• First, unplug unit. Then, prepare a rigid wire (e.g. an extended paper clip, etc.) and, applying moderate force, insert it straight into the hole at the base of the tray. The tray will eject a little. Now, pull the tray all the way out and remove the disc. (P. 10)
In Stop mode, the VCR motor (CYLINDER) continues to rotate...	• To enable Quick Play mechanism, the VCR cylinder will rotate for about 3 minutes. This reduces response time from Stop to Play mode and from Play to Rewind Search mode.

Warning and Instruction Displays

Check the following points once again if you are having trouble with your unit.

OSD	Caution	Page
PLEASE SET CLOCK BEFORE PROGRAMMING	If you attempt to set or review a Timer Recording or set the On-Timer and the Clock is not set...	**16, 17**
CHECK CASSETTE RECORD TAB	If you press REC, and a cassette is inserted with no record tab...	**4, 18**
TO CANCEL TIMER REC HOLD DOWN STOP KEY FOR APPROX 3 SEC	If you press STOP during a Timer Recording...	**31**
NO CASSETTE PLEASE INSERT A CASSETTE	If you press PLAY, FF, REW, or REC without a cassette inserted...	**18**
PLEASE PREPARE FOR TIMER REC	If the unit is not in Stop mode or a cassette with record tab is not inserted two minutes before a Timer Recording is about to begin...	**30, 31**

OSD	Caution	Page
VIDEO HEADS MAY NEED CLEANING PLEASE INSERT HEAD CLEANING CASSETTE OR REFER TO MANUAL END: PLAY	If head cleaning becomes necessary while playing back a tape...	**6**
VCR LOCK ACTIVATED	If you press a function button other than STOP/EJECT or POWER while the unit is in VCR Lock mode...	**39**
PLEASE CHECK THE DISC, AND FOR STAINS OR SCRATCHES ON DISC	If you press PLAY, or the unit reads data from a stained or scratched disc in DVD mode. Also, if the type of disc is other than DVD, Video CD or CD...	**7**
IT IS PROHIBITED TO COPY DVD/ VIDEO CD/CD TO VHS	If you press REC in DVD mode...	**18, 19**

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